

THE

Desert

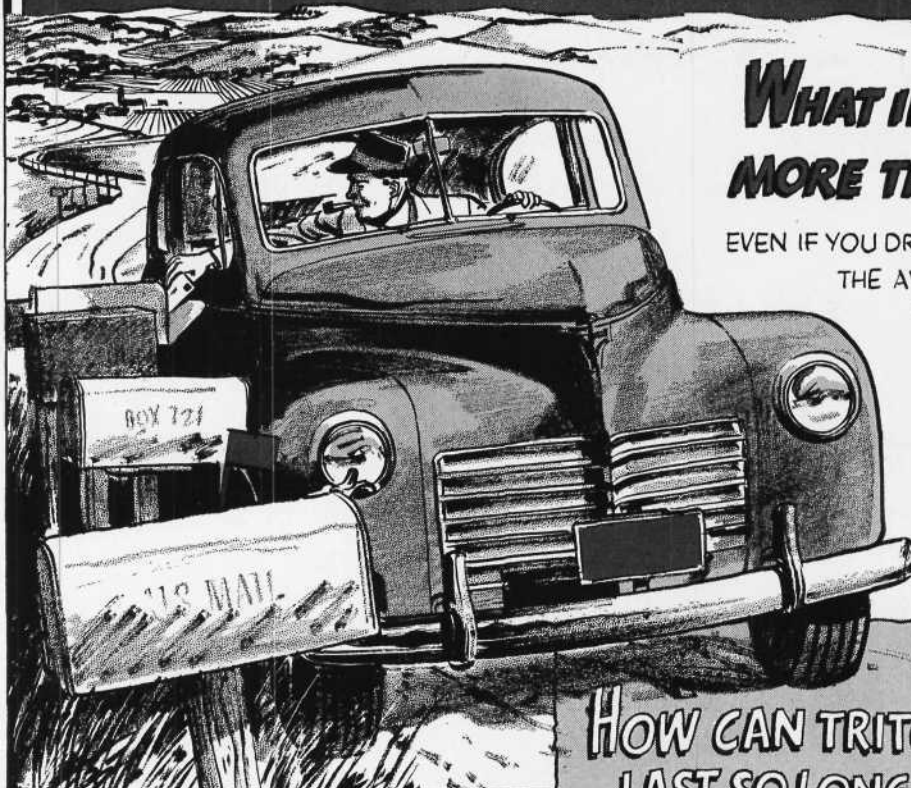
M A G A Z I N E



JULY, 1947

25 CENTS

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UNION OIL COMPANY
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DESERT CALENDAR

- July 1-4—Annual fiesta and devil dance, Mescalero Apache reservation, New Mexico.
- July 1-6—Hopi arts and crafts exhibit from museum collections, Museum of Northern Arizona, Flagstaff, Arizona.
- July 3-6—Annual Frontier Days celebration and rodeo, Prescott, Arizona.
- July 3-5—2nd annual Bit and Spur club rodeo, Tooele, Utah.
- July 3-4—Round Valley rodeo, Springerville, Arizona.
- July 4-5—Western Motorboat championships, Pineview lake, Ogden, Utah.
- July 4-5—Amateur rodeo, Willcox, Arizona.
- July 4-6—All-Indian Pow-wow and rodeo, Flagstaff, Arizona.
- July 4-6—Pioneer days fiesta, parade, barbecue, Banning, California.
- July 4-6—Reno rodeo, Reno, Nevada.
- July 4-6—Gallup Rodeo, Gallup, New Mexico.
- July 4-6—State golf tournament, Albuquerque, New Mexico.
- July 6—Concert, Salt Lake City Tabernacle choir, Tabernacle, Salt Lake City, Utah.
- July 6—Walker lake outboard motor regatta. Sanctioned races with 200 entries. Hawthorne, Nevada.
- July 8-12—Ute Stampede and rodeo, Nephi, Utah.
- July 13-18—National Governor's conference, Salt Lake City, Utah.
- July 14—Annual fiesta and corn dance, Cochiti Pueblo, New Mexico. Photography prohibited.
- July 14-19—Days of '47 championship rodeo, State fairgrounds, Salt Lake City, Utah.
- July 16-19—Heber City Rodeo, Heber City, Utah.
- July 17-19—Raton Rodeo, Raton, New Mexico.
- July 18-24—Ogden Rodeo, Ogden, Utah.
- July 19-20—Mineral show, Yavapai Gem and Mineral society, offices Arizona Power company, Prescott, Arizona.
- July 20-24—Field meeting of Society of Vertebrate Paleontology in northern Arizona, starting July 20 at St. Johns and ending at Grand Canyon or Cameron, July 24. Professor Edwin D. McKee in charge of accommodations.
- July 21-August 10—*The Promised Valley*, Music-Drama, University of Utah stadium, Salt Lake City, Utah.
- July 23-24—Centennial parades, Salt Lake City and elsewhere in Utah.
- July 24—Dedication of "This Is the Place" monument, mouth of Emigration canyon, Salt Lake City, Utah.
- July 25-26—Taos fiesta, Taos, New Mexico.
- July 26—Annual fiesta and green corn dance, old Santa Ana pueblo, New Mexico. Photography prohibited.
- July 27-August 6—Carbon County Centennial program, Price, Utah.
- July 31-August 1-2—11th Annual Robbers' Roost Roundup, Price, Utah.



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Agua Caliente cove, where many visitors have regained health in the mineralized spring waters. The springs and the more or less permanent camps of Agua Caliente's "guests" are in the fringe of mesquite trees at the base of the mountain.

Healing Waters at Agua Caliente

To the Mexicans who first explored the Southwest, every spring where warm water comes from the ground was *agua caliente*. In Spanish the words mean warm water. Today there are many Agua Calientes on the map—and one of them is located in San Diego county, California, where Americans seeking health come to bathe in its mineralized waters. So far, this Agua Caliente has resisted all efforts of those who would commercialize it—and Marshal South has written a vivid account of life in a community where there is cooperative democracy, without admission fees or profit.

By MARSHAL SOUTH

THE Indians have gone now, and so have the bighorn sheep. But in the hushed peace, where the desert wind rustles the mesquites and stirs the tall ranks of the arrowweeds, the hot and cold springs of Agua Caliente still spill forth their healing waters across the sunlit sands.

It was on a day in late April that I went back to Agua Caliente, in San Diego county, California. I had not seen it for many years. But this day, all at once, the urge of it was upon me. Perhaps it was the throbbing stir of the new springtime. Or perhaps it was the haunting voice of the wasteland calling. Or perhaps I was just

curious. "Agua Caliente has changed," some people had told me. I wanted to see for myself.

Scarlet Buglers winked their gay flowers along the footslopes of the sierras, and as my old car wound its way out into the desert, along the roadside there were lively scurrings of quail. The mesquites were vivid green jewels in their new leafage, and here and there in the brown-grey monotone of the silent, stretching land, the Spanish bayonets were exploding in fountains of creamy-white bloom. Sunlight, sharp and dazzling, beat upon the harsh flanks of the tawny hills, and the canyons that lay beyond the low crests of the rolling fore-slopes were mysterious in a thin haze that was as blue and metallic as the fume from hot artillery. Warm quiet lay over all the world. There was a faint stir of wind, but it was hushed and meditative. Away to the southeast a towering thunderhead, rising above the dim distance of Mexico, was a mighty carving of ivory, posed against the vivid blue of an inverted turquoise bowl.

Ocotillos flaunted their crimson flags along the ledges of Box canyon. And in the lower reaches of Mason valley the tall green spears of the mescals already were

flaming to gold. It was lower here, and warmer. Blossoms were further advanced. The mesquites were showy with feathery tassels and the canary-yellow flowers of the creosotes were already well interspersed with the silver spheres of developed seed pods. The car radiator boiled lustily, demanding frequent stops for refilling from the battery of five gallon cans which I always carry. The radiator, like all the rest of the car, is old and temperamental. It has been that way so long that I would not feel quite at ease if it were to reform.

Past Vallecitos—the sleepy brown adobe of the restored old Overland Stage station brooding its memories against the green of the tule marshes—and along a winding road that followed a wash and then lunged between sere ranks of savage Bigelow cholla. And then, suddenly, three and a half miles beyond Vallecitos, a battered metal sign: "Agua Caliente Springs!" I swung into the side trail and threaded between the thrust of thirsty foothills.

And, abruptly, there was green—the soft friendly green of clustering mesquites and catsclaws. And there was the sway of arrowweeds, and the shadows of little gullies and canyons and the sunlit glare of grotesque formations of white, chalky earth. There was the brown blur of tents and the flash of the sun upon the metal sheathing of parked trailers. Agua Caliente—Hot Water. Yes, since last I had seen it, the place had changed.

But changed for the better. Somehow I knew, even before I had parked the car and climbed out. You sense those things. All places have an atmosphere of their own—either for good or ill. And there certainly wasn't anything ill about my first impression of Agua Caliente. It was decidedly friendly, and refreshing and different. I was at home—and very happy about it. Because I had come prepared to find—well, never mind what I had come prepared to find. As long as the world rolls, I suppose, there will be a certain class of people who will spread malicious and unfounded reports. They would spread them about Heaven itself—and have, in fact, done so. But it is nice, sometimes, to explode their fabrications.

Figures were moving among the trees. From the quiet, unobtrusive assurance of their actions they might very well have been a part of the long dead days that are past. These people were not Indians, though. They were modern Americans. There was no sound of voices or camp activity or clamor. Peace moved with the wind through the sunlit green of the mesquites and the catsclaws. And the rugged strength of the backing, everlasting mountains lay like a benediction over the little cove. The old spirits of the desert had not been dispossessed. They still ruled. You forgot the glint and the shapes of the city-built trailers. They had been transmuted.

The two fig trees were still there—and the two pepper trees. By whose hands they



Mrs. D. J. MacDonald—the "mayor" of Agua Caliente, beside one of the pools where many have found relief from their ailments. The campers drain and clean the pool regularly.

had been planted I do not know. But they are lousy trees now. They fitted the landscape too, and were part of the picture with the native vegetation. But the little cabin, which in former years had stood near them, had vanished as though it had never been. Torn down and hauled away to the last board and nail by other desert dwellers perhaps. Or perhaps burned. Anyway it was gone.

There was a box lettered "U. S. Mail" nailed to a post. And near it a neat sign which directed me to the "City Hall." There were other signs too, very neat and orderly, which gave the names of established residents and indicated their camp-

sites. Some of the citizens of Agua Caliente have been there a long while.

Civic office, title and honor—all of it purely complimentary and unofficial—gravitate naturally, in Agua Caliente, to the residents of longest standing. I therefore set out in search of Mrs. D. J. MacDonald, who, by virtue of residence seniority, now holds the office of "mayor." I was not unmindful of the fact that I had been promised the keys of the city should I ever happen to come to Agua Caliente.

I found the mayor in an attractive "office"—which was a cozy, tree-shaded trailer, tucked away in a peaceful campspot. She was reading a book of philosophy.

But this was laid aside in order that proper official attention might be given to my stated mission. The promise of the keys of the city was recalled. But diligent search failed to locate them. It was concluded that the last person to be so honored had pocketed the keys and forgotten to return them. Only one of the keys was any good, anyway. That was the key of an old Yale lock—which had been lost. The other two keys were of the kind used to open coffee cans. We concluded to do without the keys. But the mayor graciously consented to act as my guide and escort in a tour of the city. The squad of motorcycle cops were away on vacation, and the "official" city car was laid up for repairs. The mayor suggested, apologetically, that we walk—pointing out, as a happy afterthought, that only a burro, or a pedestrian, could navigate the narrow trails anyway.

Agua Caliente is unique. I know of no other place in the desert—or in all the West, for that matter—just like it. As a natural health resort it has a long and honorable history, stretching further back into the mists of the past than we can ever hope to penetrate. For how many years—or centuries—these healing springs, both hot and cold, have welled from the earth and spilled their precious waters across the

glinting desert sands no man can tell. But the Indians knew of and appreciated the waters and the locality. For long it had been their custom to bring their sick there for healing. In those days the bighorn sheep were plentiful in the neighborhood and the dusky dwellers of the wastelands and the nearby mountains used the springs not only as a sanatorium but also as a hunting base.

Perhaps, of any man now living, Bob McCain, that grand, picturesque and fiercely individual western cattleman, whose stock have ranged the surrounding desert for decades, could tell you the most of Agua Caliente's past history. Frank Stephens of the San Diego Museum, could have told you too—and dear old Charlie McCloud. But Frank is dead now. And Charlie also has gone on the final prospecting trip across the sunset ridges. The history of Agua Caliente wavers towards the confusing shadows.

But what matter? The waters are still there. And so is the sun and the peace and the song of the wind through the mesquites. If you want history the gentle ghosts can tell it to you. You can find them anywhere in the desert if you will lie in your blankets in the still of the starlight and listen for their whispering voices.

Cures? Well, one could tell many stories of well-authenticated cures which the waters of Agua Caliente have wrought. But the mayor, as we made our rounds of the pools and bathtubs, scattered through the mesquites and arrowweeds, was insistent on restraint in this matter of the healing powers of Agua Caliente's water. "Please be cautious," she urged. "We would not want to misrepresent or to give any erroneous impressions. Our waters here are healing. They confer great benefits and they work wonderful improvements, it is true. But the word cure is very wide and positive. I would not wish anyone to build too much hope, and be disappointed."

I agreed with the mayor. She is like that—the soul of sincerity and integrity. But, even as I agreed with everything she said, I studied her a little as she stood against a tall thicket of arrowweeds on the margin of a limpid, rock-lined pool. And I could not help remembering, as I noted the healthy desert tan of her cheeks and the clearness of her level eyes, that a year ago, when she had come to Agua Caliente, a sufferer from arthritis, she could barely walk or move and couldn't use her hands. She had been in a bad way—much worse, as she admits herself, than many other sufferers who had resigned themselves to the

One of the outdoor bath houses installed by the campers at their own expense. The "VACANT" sign hung on the outside is reversible and reads "OCCUPIED" when someone is using the bath.





This tunnel is said to have been blasted out by one of the concerns which sought to acquire the springs by filing mining claims. Occasionally it is occupied by a transient visitor at the springs.

prospect of spending the rest of their earthly spans in wheel chairs. But she hadn't fancied an exit of that sort. She had no taste for wheel chairs. So she came to Agua Caliente instead. And she has done reasonably well.

Less conservative was my old friend Joe Edwards of Julian. I hadn't expected to find Joe at Agua Caliente, but as I rounded the corner of a trail there he was, hailing me from his seat at the foot of a mesquite. "Cures?" said Joe, as we sat in the shade. "Now let me tell you about cures. Especially of rheumatic fever! Just look at my son, will you?"

I looked at the fine young man, who had just then come up. Bare skinned to the waist he was the picture of sun-tanned, healthy vitality. "The springs did it," said Joe with deep feeling. "Why, do you know that boy lay in bed for five months dying with rheumatic fever. We'd about despaired of being able to do anything for him. Then we brought him down here—last year. Up to now, off and on, he's been here between seven and eight months. The springs did it."

Yes, the springs had done it. The springs—and the sun and the desert. I talked to young Joe Edwards. He is almost 19 now—supple and tanned as an Indian,

and good to look at. He showed me his own tub where he takes his mineral water baths and sun baths. Like all the other tubs and bathing facilities which the campers at Agua Caliente have installed—by their own labor and at their own expense—it was scrupulously clean. The clear, crystalline warm water bubbled in through a pipe, and there was also an ingeniously devised shower. The bath-house was roofless and the warm desert sun beat in with electric health. Outside the wind came down the flanks of the mountains and across the mesquites in a gentle rustle that was somehow full of peace and healing and abundant promise. I sincerely believe that it would be hard to stay sick at Agua Caliente. There is a something there.

And it is that very something which the present residents of Agua Caliente—campers, all of them—are especially anxious to hold and to protect. They don't want the springs commercialized. For they realize that the minute this happens the something will be killed. The virtue will be gone—and these free healing desert hot springs will be lost, for all time, to the very people who need them most.

And they face a very real danger. For all down through the record there have been attempts to grab Agua Caliente. To

commercialize it—to exploit it as a profit enterprise. There are such plans in the offing right now. Fostered by interested parties, all kinds of rumors are in circulation regarding Agua Caliente. The place, you will be told, needs supervision and control—meaning that it should be made to pay a profit to someone. To a great many warped minds it is nothing short of a scandal that there should be a desert spot where the general public can go freely and, without cost or fee, enjoy the waters of healing which the Great Spirit designed for the benefit of all his children.

Thus the undercover agitation for the control of the springs—for the erection there of some sort of a charge sanatorium. It is the old story. Many attempts have been made to tie up the area. Men have tried to homestead it—working in secret agreement with commercial interests. Other men have dug holes in the ground and endeavored to hold the territory as a mining claim. There have been all kinds of subterfuges.

But uncannily, every one of these schemes has failed. Misfortune—and death—have been the weapons which the Guardian Spirits of these healing waters have wielded against every designing individual. And with deadly effect. For no

scheme—or schemer—however suave and plausible, has ever succeeded. The miners have been broken, and thwarted and frustrated. The homesteaders have pulled out in disgust—or have died. Strangely, grimly, the Spirits of the springs guard their own.

But the citizens of Agua Caliente today, are nevertheless keyed to watchfulness and are fired with a resolution to uphold their freedom—and the freedom of the waters. With a regular population of about 20 campers (the number fluctuates), the springs run themselves as an ideal, mutual-interest community. It is a reversion to the old Indian system. A community which functions after the manner of those of the Hopis—the peaceful ones. The present organization (or absence of organization) of the Agua Caliente community is unique. It is a model of order, neatness, contentment—and cleanliness. Nowhere will you find more orderly, spick-and-span camps. Every camper seems to take pride in his campsite. There is no evidence of trash or litter. Many of the campers have tiny gardens in which a few gay flowers nod bravely to the desert sun. Peace and fellowship walk the trails through the arrow-weeds and mesquites. Those individuals who are fond of dreaming of the brotherhood of man and of the idyllic life might study the pattern of this unique little community with interest. The average stay of resident campers—other than transients—is about three or four months. There are cold springs as well as warm ones. For the use of the warm, healing waters, the campers have erected several free community bath-houses (one tub each). I visited these bath-houses and found them scrupulously clean. There is nothing pretentious about them. But the work that has been done, with the available materials, has been well done. The temperature of the warm water is about 100 degrees as it issues from the springs. The supply is a little limited, and with the installation of more tubs the temperature tends to diminish. At the present time, due to this, the temperature in most tubs runs about 92 degrees F. The water is said to contain sulphur and iron. But I have no analysis to consult at this time. However such technical details are of small moment. The important point is that there is healing virtue in Agua Caliente water and in its sunshine and dry air. It is a combination which is of great benefit in cases of arthritis, rheumatic fever and sinus troubles. The springs are about 38 miles from Julian, California, and best reached over State Highway 78, which connects with a good graded road that turns off at Scissors Crossing—12 miles from Julian—and goes to the springs by way of the old Overland stage station of Vallecitos. The springs are three and a half miles beyond Vallecitos.

As a final word, I would say to interested readers: Don't go to Agua Caliente unless you are a real desert lover and are

serious. It is distinctly no place for whoopee parties of the merely curious. The community is not at all like that—and its dwellers resent such atmosphere.

If however you are a genuine lover of the desert, and the freedom of the great open spaces where peace and freedom and health still walk—and if you are genuinely in search of healing—the unique community of Agua Caliente will welcome you with sincere human brotherhood. Their desert is precious to them. And so are their healing waters. Let's hope they will always remain free!

HOOVER DAM; BOULDER DAM— NOW HOOVER DAM AGAIN

President Truman brought official, though possibly not actual, end to 15-year controversy when he signed congressional resolution, approved by house and senate, which made Hoover dam legal name of big Colorado river structure which has been known as Boulder. Dam once before carried Herbert Hoover's name, being named

for him by Interior Secretary Ray Lyman Wilbur in September, 1930, following precedent used with Roosevelt and Coolidge dams.

When Harold L. Ickes became secretary of interior in 1933, he started controversy by changing name to Boulder dam. With return of Republicans to power in last congressional elections, bills were introduced by Representative Anderson, Republican of California, and Senator Hawkes, Republican of New Jersey, to restore Hoover's name. President Truman signed bill with four pens, which he sent to Lawrence Richey, Hoover's former secretary, with thought that Hoover might wish to distribute them.

Hoover, as secretary of commerce, presided over joint federal-state committee which, beginning in 1921, worked out program for financing structure. As president, in June 1929, he issued proclamation which made project effective. Ickes, after measure was signed, declared, "It's going to be Boulder dam for me."

Hard Rock Shorty of Death Valley . . .

By EVA WILSON



"Naw, yu can't beat Nature," Hard Rock Shorty was saying as he fitted his back against the post in front of the Inferno store and gently massaged his spinal area.

"No sir! Th' feller that uses the forces o' Nature shows brains. The best payin' mine me an' Pisgah Bill ever had was worked by Nature. Piled up nuggets while we slept."

Shorty slid down two vertebra more, then took his pipe out of his mouth, while the occupants of the bench against the wall waited for him to go on.

"Me an' Bill got t' missin' things around the shack, like the nail I used to hook my suspenders onto my pants, an' the rock Pisgah used fer a thimble. It went along that way for awhile an' then the spoon I used t' stir my coffee disappeared. I remembered dropping it on the floor, but it wuzn't there next mornin'."

We startin' huntin' aroun'. Yep, I'll bet you've guessed it—pack rats! An' what do yu think them unlogical, teetotalin' varmints left in exchange? Gold nuggets! If I never leave this here porch, them rats had brought in a nugget for every article they took away. We found 'em stuck in corners and cracks all aroun' the room.

"Then Pisgah began gettin' ideas. Why not go out and trap a lot more pack rats and get 'em workin' fer us. It was a sure thing we could tote in small objects and leave 'em layin' around faster'n any crew of pack rats could carry 'em off. The more rats the more nuggets, see?"

"So Pisgah rigged up one o' them box traps and set it over on Eight Ball creek where they wuz a lot of the varmints. And sure enough he caught four of 'em the first night. Pisgah figgered we hafta sort o' train the new rats fer their job. So he put 'em in the box where we wuz keepin' the nuggets. 'Gotta make 'em acquainted with the stuff we want,' he explained.

"Next day me an' Pisgah had to go over an' do some assessment work on our zinc mine, so we put some feed in the box and left 'em there fer a couple o' days.

"When we got back, he rushed over to the box t' see how the pack rats wuz gittin' along. When he turned around I could see somethin' wuz wrong.

"'Shorty,' he sez t' me. 'I'm a gosh-darned ol' blather-head if them varmints ain't double-crossed us. They gnawed a hole in that gold-durned box and toted off them nuggets, an' look what they left in place of 'em. Hunks o' jumpin' cactus!'"

THIS GRAND CANYON

By CHARLES ARTHUR PORTER
Los Angeles, California

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In early dawn of this dark earth,
When planets formed from chaos still,
The rush of water, fire and air
Began to leave their marks until
This hour. Thus we behold epochs
Of the Universal Will.

'Tis but for us to stand enthralled,
With vision of the plan divine,
To witness here the rise and fall
Of Humankind upon its climb
To depths and heights as written here
In stone, the records of all time.

The Universal Laws that govern
Manifested Life, revealed
In form and structure—color—light.
The Mystery of Life is sealed
From those who worship Error's shrine
But to Truth's worshippers, revealed.

These deep, red walls reveal the blood
The race has shed in ignorance
Of Life; and reaps a just reward
For all its vaunted arrogance.
The tears and sighs of all the past
Lie here as muted evidence.

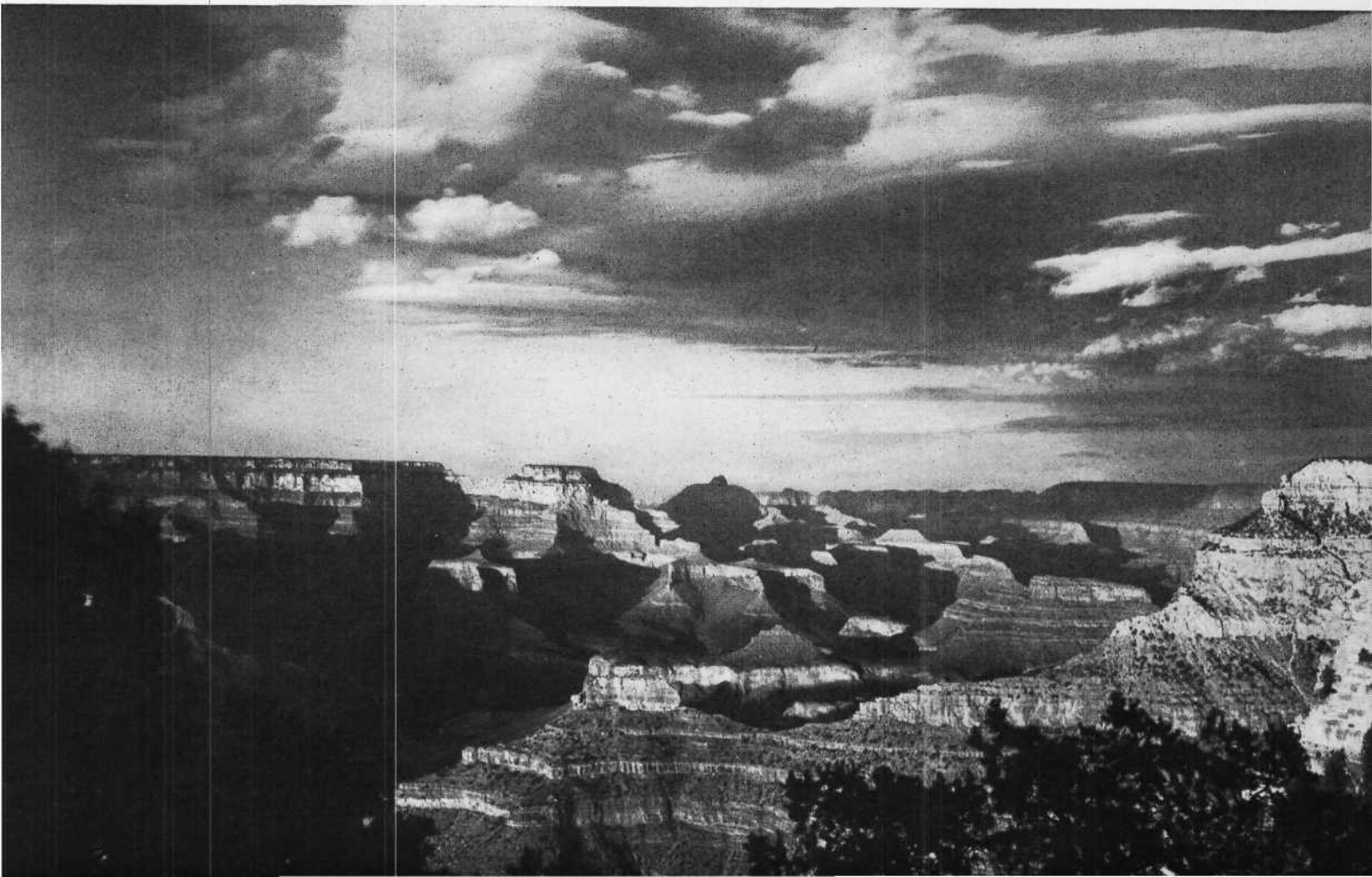
And yet, the happiness and joy
Of all the past, re-echoing
From wall to wall, ascending,
Joins the Symphonies of Heaven.
When earth and sky are joined in peace
All things unto mankind are given.

The verdant lines which mark the depths
Of this great gash upon earth's breast,
Bespeak the freedom we have now,
Since all the earth's from war at rest.
Beware! lest pride of Victory
Will lose our fight in future test.

Then too, in spite of wind and storm,
There is a peace serene that hovers here.
And since it is a peace divine
'Tis not of indolence nor fear,
For in the still of the night
One listening, hears wings draw near.

All this and more we see and feel
As we stand mute, at Nature's Shrine.
So let us then rededicate
To God, our lives for future time,
That Love may grow among mankind
And crown the earth with Truth's own Shrine.

Photograph by Ben D. Glaba—U. S. Reclamation Bureau





During the boom days most of the hillside in this picture was covered with the tents and shacks of miners and camp-followers. Main street is in the foreground between the ruins of brick buildings.

Golden Harvest at Aurora

Millions in gold came from the shafts at old Aurora—but that was long ago. Today a lone prospector lives in the deserted community—and is happy when his \$25-a-ton ore produces food and shelter and an occasional trip to the outside. Here is the story of a ghost mining camp which nearly started a war between California and Nevada.

By JAY ELLIS RANSOM

AUGUST 26, 1860! A trio of discouraged, desert-weary prospectors crossed a low divide near Beauty Peak, Nevada. The three men, E. R. Hicks, J. M. Corey, and J. M. Braley, descended into a meadow at the juncture of three canyons just below timberline at an elevation of 7415 feet. A sparse covering of pinyons dotted the grey sagebrush slopes. A tiny stream of clear water scarcely a foot wide meandered through the meadow.

As a heraldic sunset blazoned over the upflung mountains to the west, Hicks said wearily to his companions, "If you'll get camp set up, I'll take a look up the draw

where this creek comes from. Might be a deer coming down to drink, and we need fresh meat."

With his rifle over his shoulder and his frontier Colt strapped to his hip, Hicks followed the thin trickle of water into a narrow canyon. Turning over in his mind the vagaries of fortune that attended prospectors, and the perversities of deer in particular, he scrambled up the narrowing gorge, his prospector's eyes unconsciously searching for any likely ledge or fleck of color. He noted the rhyolite and andesitic overlay on a granite unconformity broken by intensive faulting.

Suddenly, where the canyon turned sharply west, he stopped and whistled. At his feet lay exposed a narrow vein of quartz gleaming with free-milling gold. All about him other veins blue with silver crisscrossed the rocky walls. With the glory of the recently discovered Comstock in his mind, Hicks raced back to his party, pockets bulging with hastily gleaned samples.

"We've struck it!" he yelled as he neared the little camp. "We've struck another Comstock! It's gold, and silver. There's millions!"

"Where?" shouted Corey and Braley with one breath. They glanced over the specimens pouring from Hicks' pockets. Excitedly he led them in the gathering dusk to the newest of the great bonanzas that were to make Nevada one of the most fabulous states of the nineteenth century. After staking out their claims, and scarcely able to contain themselves with their new visions of wealth, the three prospectors

waited out the night until they could strike camp and hasten back a hundred miles to Carson City to register their claims and to spread the good news. Thus was born the gold camp of Aurora.

August 10, 1946! Eighty-six years later I turned my car from the smooth pavement of Nevada State Highway 3 at Wellington and started over the route blazed by Hicks and his companions with their plodding burros. I sought neither gold nor deer, but only photographs and a story. Time has wrought many changes in Nevada. Burro track has become paved highway. Tent camps are now modern cities. The stage and freighter have been replaced by automobile and airplane. Aurora, the wickedest, the wildest, the richest, the goriest, and the greatest camp ever to flame across the Nevada heavens, has become a ghost city of desolate ruins.

Ahead of me the dirt road twisted and turned among barren hills with ever changing vistas of mountain ranges before my eyes. No sign posts pointed the way. Lonely cattle estancias marked the links of progress at long intervals. Finally, at Fletcher a cowpuncher showed me the last lap of the route to Aurora. Rough and rutted, the old road wound into the mountains. The last five miles was a last gasp, low gear grade over a road cut to bedrock by the passage of 80 years, and rutted deeply from recent rains. As I passed the enormous cement foundations of the 100-stamp mill, like breached battlements of an old fortress, and crossed the divide to descend into the narrow valley where Hicks discovered his Eldorado, another flaming sunset crested the hungry mountains, and touched the sagging buildings of Aurora with an unreal fire. Windows gleamed a ghostly welcome.

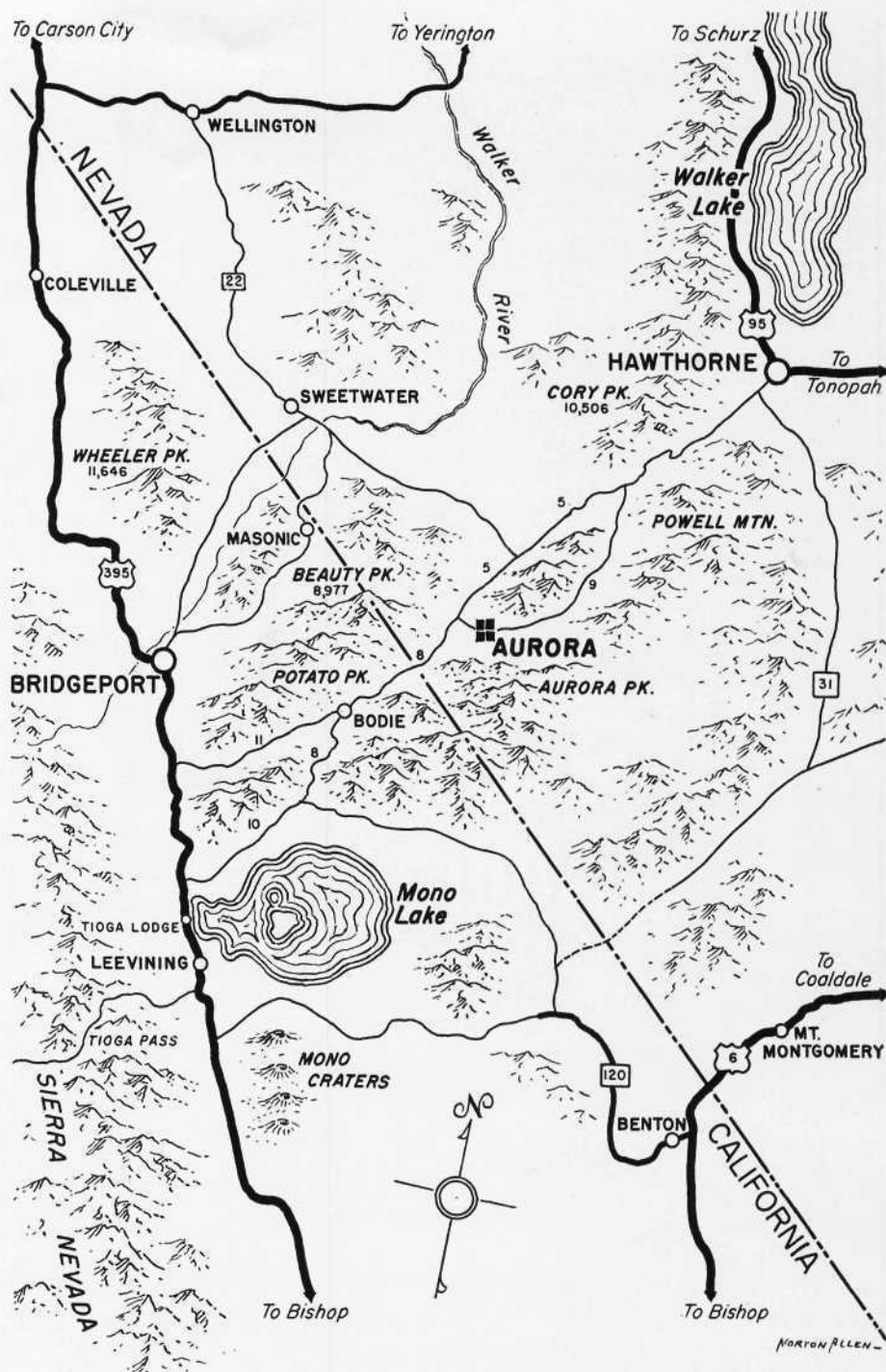
The structures were in ruins. Streets straggled up the canyons, lined with crumbling brick walls, with a lush growth of sagebrush between them.

I drove up famed Antelope street where wheel tracks were kept free of obstruction by the occasional rancher on the look-out for cattle. At the end of the street where it ran halfway up a canyon, I found a hodgepodge of old shacks, near one of which stood a late model pick-up truck.

A thin whisp of smoke pouring out of the tin chimney of the most prepossessing shack indicated that Aurora was not entirely deserted. Parking my car, I went to the back door. Inside the house a graying, stoop-shouldered man in faded denims and a patched blue shirt was slicing bacon. The table was set for two people.

"Come on in," L. B. Stevens greeted me hospitably. "I saw you drive in and figured you'd find me. Got the table all ready for supper."

"I'm certainly glad to find somebody here," I said heartily, shaking his gnarled hand. "Back at Wellington there wasn't anybody to say whether Aurora was inhabited or not, but on the map they've got



it marked like any regular town where a body could get food and a bed."

"There's a bed with a mattress in the next room," Stevens grinned. "Stay as long as you like. I haven't seen anybody for so long, I've almost forgotten what it's like to have a guest."

While I washed up in a tin basin of water, I asked him how he happened to be in Aurora. After some reflection the old man related his story while he finished setting out steaming plates of food. As we sat down to a meal of thick, fried slabs of lean bacon, potatoes boiled in their jackets, and a fluffy stack of soda biscuits with honey, he told me his story.

"I've been here 15 years," he began. "Back in the depression days of 1931 I couldn't get a job mining with the big

companies, so I figured I might be able to make day wages mining for myself. Well, sir, I've been doing it ever since and never felt healthier or more satisfied in my life."

As darkness deepened and the brilliant white glare of the gasoline lamp thrust the shadows back under the red hot stove, he told me something of the early history of Aurora as he had heard it from old-timers long gone. "This is the Esmeralda mining district," he said slowly. "It stands astraddle the California-Nevada border. Once both states claimed it, and even fought a battle over custody of some desperados."

"In the morning I'll show you Gallows hill where the vigilantes hung the four ring leaders of the John Daily gang. Let's see," he said musingly. "That was on the 9th of February, 1864. Yes, it was in the armory



Aurora's lone occupant today is L. B. Stevens, seen here working at the mouth of his Yankee Knife shaft where at 60 feet he is bringing out ore which yields \$25 a ton.

at the mouth of this very canyon, across from the courthouse round the bend, that the vigilantes were organized. It's a historic spot. If you go up to Boot hill, you'll see the graves of the desperados, and some of the vigilantes too."

In order to tame the wild west of the sixties and bring civilization to the raw frontier in an era when gold dust passed for currency and the six-shooter ruled the roost, men's passions had to be bridled and law and order forcibly established by plain citizens. No other region was quite so wild and lawless during the short span of years, 1860-1870, or quite so defiant of the Ten Commandments. Few sections of the mining west brought forth such immense wealth in so short a time.

"Thirty million dollars from Aurora in nine years. Seventy million from Bodie in thirty!" The old man's blue eyes gleamed as he recalled the adventure and excitement of those days.

As I slid into my sleeping bag, the night air of that high country streamed through the doorway, crisp and keen, odorous with pinyon pine and sagebrush. Then, morning came abruptly with a loud pounding of a long-handled spoon on a frying pan.

"Come and get it," Stevens' voice was impelling with the promise of a full day. "Breakfast's ready."

My watch said 5:30. I rose and shivered into my clothes. Fresh bacon smell was in the air along with the tang of new-made coffee. After breakfast Stevens brought

out some specimens he had picked up around Aurora. He showed me a huge calcite geode nearly a foot in length. "If you're interested in rocks, there's lots of quartz, chalcedony, and jasper. The jasper in this region is criss-crossed with chalcedony veining. I've got a hundred pound chunk up at my Yankee Knife I'll show you. It's beautiful stuff to polish."

I rode down to the center of town with him and he pointed out Gallows hill, the armory, and the crumbling walls of the courthouse. Across the narrow valley the three hills which comprise the mineral strike of the Esmeralda district raised their bald domes. "Over there on East hill," he indicated a large mine dump, "is the Delmonte, one of the greatest mines of the sixties. The Durand you can see on Center hill. My Yankee Knife shaft is just to the right of the Durand, cutting into the hill from an angle never tried in the early days. To the right of that, across the creek, is Silver hill where some big mines operated. That's where I've found considerable quantities of jasper."

I climbed Gallows hill slowly, enjoying the keen morning air. All about lay the bleached bones of history. Mine dumps pocked the mountain sides, with here and there a broken and crumbling stamp mill sagged crazily upon its decomposing foundations. Decaying cabins gutted by time and marauders stood scattered among the pines. I passed through Boot hill. The epitaphs, while reflecting the easy philosophy of life and death so characteristic of that violent era, yet overflowed with true sentiment and love, expressed in the stark simplicity of the pioneer heart.

A year after Hicks reported his strike, so many people had rushed into the new diggings that on November 25, 1861, the Nevada territorial legislature established Esmeralda county and made Aurora, the only city in an area larger than most eastern states, its county seat. By 1864 Aurora was a metropolis of 10,000, with two newspapers, a brick school, a two-story courthouse and jail, two armories with fully equipped companies of soldiers, two brass bands to play at public functions, and blocks of pretentious buildings—constructed of brick shipped from Sacramento, 30 hours distant.

I picked up many fine specimens of quartz crystals, finger size and smaller, the larger pieces being topaz in color. When I reached the Yankee Knife, Stevens showed me some beautiful rose and lilac chalcedony which is found on a base of almost white chalcedony in an amygdaloidal rock. He pointed out his chunk of jasper.

"That's worth hundreds of dollars if it were cut up and polished." His words held a cool disregard for values not associated with hard-rock mining. "Quite a change from the old days. People aren't looking for gold and silver nearly so much as for agate and jasper."



Famous courthouse, police station and jail where the administrative officers of two states held forth—until it finally was revealed that Aurora properly belonged in Nevada.

He straightened up and turned his eyes toward the lower canyon, his keen mind already bridging the river of history along whose banks he had spent so many years. "Down there," he gestured mildly, "once stood a big opera house where all the best New York opera companies played. They came down from Virginia City by stage coach. When Aurora died, the theater was moved to Bodie and converted into a quartz mill!"

The fantastic glory of the new Eldorado enticed more than its share of rowdies, murderers, bandits, gamblers, highwaymen, and camp hangers-on. Gambling places, honkytonks, saloons, rooming houses, and business establishments of every description mushroomed and thrived for a decade.

He showed me through the tiny three-stamp mill he had built from odds and ends picked up around Aurora. "I get about \$25 a ton when the ore is crushed and panned out," he said proudly. Then he led the way through a cross-cut tunnel into his Yankee Knife shaft and we climbed down into stygian darkness, lit only by the pallid flickering of his miner's

lamp. He pointed out the hanging wall which marked a fault line.

"I'd sure like to know which way to dig now," he mused. "No telling which way the vein's slipped. But that's characteristic of this district."

At noon we climbed into his truck and drove back to his cabin. We passed the remnants of the famous courthouse where both California and Nevada maintained full judicial offices for several years when the states almost came to blows over the jurisdiction of the district.

"At one time," Stevens related, "the speakers of both state legislatures were elected simultaneously from this one camp. People used to vote first for Nevada in one set of polls, and then in a different set of polls vote for California on the same day."

The boundary dispute finally was settled when surveyors located the true line three miles west of Aurora and five miles east of Bodie, in Mono county, California. Today the old military post with its empty, dust-filled horse watering trough still stands squarely on the border where once soldiers patrolled in the interest of maintaining peace and security between two lawless and incorrigible cities.

As we sat down to a cold lunch of bread and bacon slabs left over from breakfast, my kindly friend told me a story illustrative of the wildness of those times. The Bodie mines did not begin to produce their greatest wealth until Aurora, her candle blazing furiously at both ends, had come to extinction. The riff-raff which had infested Aurora and had been run out by the vigilantes, then made Bodie famous with a phrase current for decades.

"'Bad man from Bodie,' they called them then," Stevens laughed.

After lunch I prepared to leave for Bodie. As we shook hands, Stevens' eyes crinkled with a heart-warming invitation. "Come back and stay longer," he said. "I will," I promised, and I meant it.

Except for this weather-beaten hard-rock miner, Aurora is today utterly abandoned, and has been for the most part since the last mines closed back in 1882. There are none among the living, to recall at first hand the glory, the battles, and the excitement among those lonely mountains three generations ago. But the evidences of the frantic activity remain scattered throughout the golden hills.



Tsianina in the early days of her singing career.

By HOPE GILBERT

AS the rays of dawn spread fanwise above the canyon wall, tingeing the tips of the tall spruce trees, the rich voice of the Indian singer Tsianina intoned the stirring words of the Zuni Invocation at Sunrise.

It was a thrilling moment for those of us who were privileged that August morning at Mesa Verde national park to stand at daybreak on the brink of the canyon and listen to the Sunrise Call by the foremost singer of her race. Only two months be-

fore, Tsianina had sung before an audience of 47,000 in the Hollywood Bowl. Now, standing on the edge of the 500-foot cliff and looking across the narrow canyon we could discern in the ancient ruins of Spruce Tree house the arrow-straight figure of the Indian woman. The cliff wall behind her served as a perfect sounding-board as the solemn tones of her clear voice came winging across.

Sunrise at Mesa Verde was one of the highlights of the 1200-mile archeological tour through New Mexico and Colorado which a small group of artists and schol-

ars enjoyed in the summer of 1926. It was my good fortune to accompany this group. The late Dr. Edgar L. Hewett of the School of American Research in Santa Fe was our guide.

Tsianina Speaks for the Indians

The party included Charles Fletcher Lummis, Lansing Bloom of the University of New Mexico, Kenneth Chapman, artist and archeologist of Santa Fe, Hartley Burr Alexander, professor of philosophy and author of learned volumes on Indian folklore.

Charming in manner, erect, graceful in carriage, with a ready smile and a twinkle in her eye, there was moreover a forthright dignity about Tsianina that at once commanded respect and admiration. This is my memory of her as I knew her that summer when she was at the peak of her singing career, and this impression of her still holds today.

Since returning to Pasadena from Santa Fe on the same train with her, following the fiesta of August 1926, I had known she made her home in Southern California. But my contact with her had been broken. So when I learned she is now living in Burbank, arrangement was made to call at her home. At the end of a warm bus ride she met me and drove me to her delightful home in the shadow of historic Cahuenga pass. With Tsianina lived Irene, a Choctaw Indian girl.

Tsianina would be a remarkable woman in any race. As an Indian she commands

added interest at a time when the destiny of her red brothers, for whose rights she is fighting, hangs in uncertain balance.

Tsianina was born near Muskogee, Oklahoma. Her father was a Cherokee and her mother a Creek. She received her early education in a government school at Eufaula. Feeling keenly the value of preserving the best in the Indian heritage, Tsianina's mother exacted her daughter's promise to revere her Indian background and never to discard entirely her native dress. That is why even today, although for practical purposes she has given up the buckskin costume, Tsianina still wears her beaded headband.

"When I look around and observe the strange headgear women are wearing today," she remarked with an engaging grin, "I feel completely up-to-date."

Tsianina's love of music has had a strong influence over her from her earliest years. Her determination as a young girl to leave Oklahoma and go to Denver to study music was one of the momentous decisions of her life. Her musical studies opened up a new world for her.

She had not been long in Denver when her piano teacher discovered she had an unusual voice, and her studies were expanded to include vocal training. Charles Wakefield Cadman was looking for an Indian singer to interpret the songs of Indians transcribed by himself, by Burton, Troyer, and others. So a meeting was arranged between the composer and the young Cherokee student. Cadman was charmed by both the voice and the lively intelligence of the Indian girl.

After six more months of diligent study Tsianina was ready to give her first concert with Cadman in Colorado Springs. This was to be a test concert. If she was well received she was to have a three-year contract with him. That initial concert in 1914 was an immediate success. Tsianina's cherished dream of becoming an interpreter of the emotional life of the Indian through his songs had become a dazzling reality.

Her concerts in Colorado were followed by a tour of the East. Everywhere the talented Indian girl was received with enthusiasm, not alone because of her voice but also because of her forthright personality.

It was during her tour of the West that I first heard her in concert with Cadman and was thrilled by her singing of *In the Land of the Sky Blue Water, By the Waters of Minnetonka*, and others. Little did I dream then that a decade later I was to be privileged to know this unusual artist.

Tsianina's tour of the United States was temporarily interrupted by World War I. Moved by her desire to contribute her share to the war effort she volunteered to go abroad to help entertain our soldiers. From various camps she assembled a group of Indians from Southwestern states. With these boys she formed a troupe which



Tsianina and the troupe of Indian soldiers who toured France during World War I as entertainers.

called themselves 'Indians of Yesterday and Indians of Today.'

She laughed as she told me of the time she and her boys borrowed the general's car and scoured a large section of Germany in search of feathers for the boys' costumes. For nine months they toured the Allied camps in France and Germany. Tsianina sang, and the boys gave spirited Indian dances and take-offs of their paleface brothers. They were adjudged one of eight best entertainment groups of the A.E.F.

With the termination of her war activities Tsianina resumed her musical career in her native land. The story of *Shanewis*, based in part upon her life and written by her, was developed into an opera by Cadman and produced at the Metropolitan opera house. Although Tsianina did not sing in the Metropolitan performance she coached Sophie Braslau in the leading role. In June 1926, Tsianina herself sang the leading soprano role of *Shanewis* in the Hollywood Bowl before 47,000 people, up to that time the largest audience ever to assemble for grand opera. Rafaelo Diaz of the Metropolitan sang the tenor role, and Oskentont, Mohawk baritone, sang the part of Tsianina's brother.

For nine years Tsianina was a leading attraction of the Santa Fe fiesta. She was made a citizen of Santa Fe, and became a member of the governing board of the School of American Research, with headquarters in the capital city of New Mexico.

Altogether Tsianina was associated with Charles Wakefield Cadman 15 years. Never in all that time did the two musicians find the need for a written contract;

always their verbal agreement was adhered to. Speaking of Cadman, Tsianina commented, "He was a wonderful person to be associated with—an effervescent enthusiast about music. To me he is an expression of that infinite spark which is the essence of life."

From her desk, as I sat watching the play of expression on her face, Tsianina picked up a check. "This," she exclaimed with as much pride as any budding author upon the acceptance of his first brain-child, "is my first royalty check for a song written in collaboration with Mr. Cadman." At my request she then played the moving song *My Mother Taught Me How to Pray*, for which she had written the lyric from the depths of her own experience. She is now writing a book, based upon her musical career and her happy association with Cadman, to be entitled *Where Trails Have Led Me*.

Tsianina retired at the peak of her singing career, 12 years ago. Laughingly she told me, "I decided to step down from the stage when I was still able to do so gracefully, rather than wait to be pushed off."

"What is the happiest memory of your years in the concert field?" I asked her.

"The friendliness of people," she replied. "Wherever I went, the friendliness of people caught me up and carried me along. What truly thrills me now is that so many persons remember me. Hardly a week goes by that some one does not speak to me—on the street, in the market, or at the ration board offices where I did volunteer service for a year—to tell of having



Ira H. Hayes, Pima Indian who helped raise the American flag on Iwo Jima.

heard me sing somewhere in the Middle West, in the East, or even abroad.

"There is a fascination in standing on a stage and winning applause," she frankly confessed. "Nevertheless, since my retirement I have found life to be just as full, just as satisfying."

Today Tsianina's prayer is that the American people will awaken to the plight of their red brothers and demand long-delayed justice. In speaking of the unfortunate position of her people, thousands of whom served in the armed forces and in the defense plants but who are denied the rights of free citizens, Tsianina spoke with intense but restrained emotion.

"Over 150 years ago," Tsianina told me, "President George Washington promised a group of Indian chiefs, 'So long as the grass grows green and the water flows, the New Republic will respect your rights.' In the light of the record of the past century and a half, the exploitation of the red man by the people of this country is a pitiful travesty of the words of Washington. Robbed of their patrimony and their means

of livelihood, and shorn of their rights as self-respecting free men the American Indians are today living under as complete a dictatorship as can be found anywhere.

"If America is to lead the nations of the world," Tsianina affirmed, "she must first become an upright leader. If she is to advocate the Four Freedoms, she must first apply those principles at home. If she expects treaties to be honored, she must first carry out her own obligations.

"Immigrants from other lands come to the United States and within one generation they and their children are granted full citizenship. But we Indians are still held outside the pale of citizenship in the land where we and our ancestors before us were born! Indian soldiers like Ira Hayes of Arizona, one of the survivors of the historic flag-raising on Iwo Jima, fought for the broad principles of freedom not alone for the paleface Americans but for their own race as well. Indians are a proud, justice-loving people. We fail to understand the logic of a government that forced our young men to fight for the freedom of

others, yet denies to them the very rights for which they fought.

"Legally the American Indian is a citizen of the United States, is he not?" I inquired.

"In 1924 Congress granted citizenship to the Indians. But citizenship and wardship do not mix. As one senator wrote to an inquiring Sioux, 'Citizenship for the Indians was merely a friendly gesture.' In practice the reservation Indians, of whom there are some 250,000, still have the status of incompetent wards whose every act from birth to death is under the supervision of the Indian bureau. Not one of these Indians may sell a cow, bequeath property, hire a lawyer, go to court, or engage in any kind of business, without express permission from an agent of the bureau.

"The Indian tribes have little control over the expenditure of their tribal funds. The Indian commissioner and the secretary of the interior to whom he is responsible are virtual dictators of a quarter million subjects.

"When he appointed John Collier Indian commissioner, President Roosevelt promised the Indians a new deal," Tsianina continued. "At first my people felt a slight surge of hope. But it soon became apparent that the so-called 'new deal' meant merely a doubling of Indian bureau personnel from 5000 to 10,000 employes, and a further depletion of tribal funds."

"Has the Wheeler-Howard bill of 1934 improved the lot of the Indians?" I asked.

"The Indian reorganization bill made many fine promises to the Indians. But the effect has been to regiment them even more completely under the paternalistic thumb of the Indian bureau, to emphasize segregation, and to force upon them a collectivist system."

"What solution do you see for the Indian problem?" I asked her.

"If the Indian is given the right education to live as a free citizen, responsible for the conduct of his own affairs, he will lift himself by his own bootstraps. To spoon-feed him like a child, to treat him as an incompetent incapable of making the slightest decision for himself, is to rob him of all initiative and hope. The Indian is tired of being treated as a museum piece. Let him grow up and take his rightful place in the land of his birth."

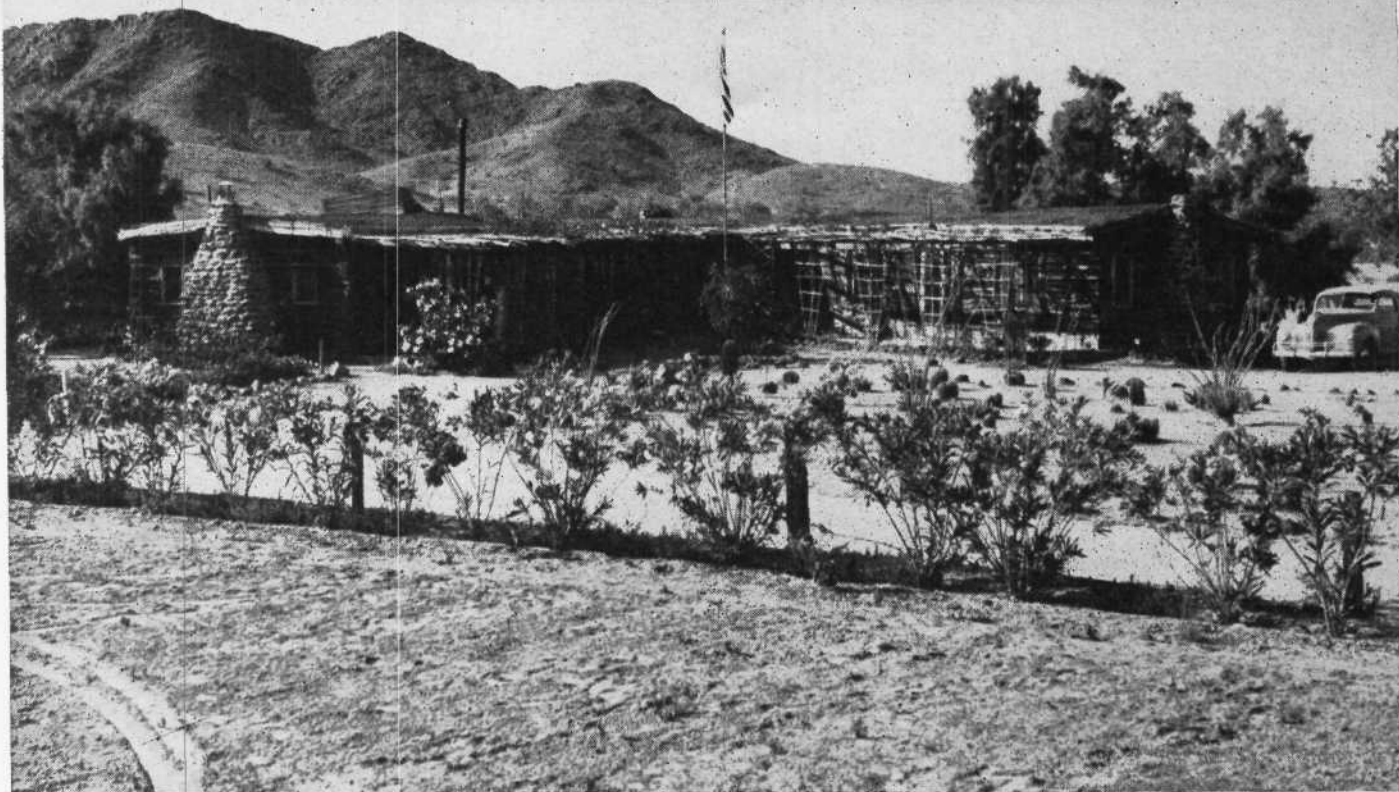
THE MIND

By TANYA SOUTH

The mind is still the key unto the soul,
And unto all good living. Let us then
Pay strictest care, the while our thoughts
unroll

That they reflect no malice and no pain
For others! That their purity unsoiled
Is utterly unquestioned! And their bright,
Clear outlook unto heights and dreams
unspoiled

Will lead us unto Truth and Love and
Light.



The Seyfried home was built entirely of discarded railroad ties, with tin cans for shingles and a dirt roof.

They Made the Desert Blossom--with Gladiolas

It was not until illness overtook them that Esther and Ernie Seyfried, past middle-age, learned that there is health and peace and security on the desert for those who are willing to do the necessary hard work. But they were workers, despite the crutch that Ernie used to carry—and here is the story of what their industry brought them.

By EDA S. JOHNSTONE

FIFTEEN years ago Esther and Ernie Seyfried would have ridiculed the suggestion that they build a home on the hot sands near Dateland in the southern Arizona desert. Who would want to live in such a place? And how would one make a living? These are the questions they would have asked.

And yet today, the Seyfrieds are living in a cozy home on that same desert—a home they built themselves—and they have found sources of income even beyond their essential needs.

Their home was built of discarded railroad ties—1500 of them—put in place by a man almost entirely unaided, past 50 years of age, and crippled. There is not only a hacienda-style structure that has become the home and guest-house of two dauntless people, but there are five master

bedrooms, a 20x40 living room, three stone fireplaces, a den, kitchen and sun-porch.

The first year there was no bedroom, but each year one was added. Now there are accommodations for 16 guests at one time, no more, for Esther has never wished to lose the personal touch, the homelike atmosphere. It would not be a resort. There is plumbing and an electric light plant, all work done by Ernie.

All this was because an arthritic condition caused by carbon monoxide gas fumes necessitated his giving up a lifelong business in the city. For years he owned and operated one of the largest repair and storage garages in Los Angeles. His physician advised escape to the desert. Having had friends in Arizona, they had often visited there. Always they observed that after a

few weeks in the healing rays of the desert sun, Ernie's condition improved. He was even able to throw down his crutches and become active. Then upon returning to the city, the old pains and stiffness returned. It was then they determined to acquire some acreage on the desert and build a home there.

They sold out their business in the city, Esther giving up an active and popular social life. They selected ten acres that were available at a point 75 miles east of Yuma on Highway 80.

Practical and systematic always, the two sat down and drew a plan of exactly what they wanted. The use of railroad ties suggested low, Mexican-style construction with angled wings. Many times were the plans altered or corrected before work was actually begun.

The Southern Pacific railroad had for sale an abandoned section house containing 235 ties, which Ernie bought for ten dollars. He also acquired an abandoned school building and a dance hall built of ties, which had been used at least 40 years before. Ernie tore down the building, tie by tie, and hauled them 17 miles in a two-wheeled trailer drawn by a small coupe

with a box built on. As many as 50 trips were made hauling these ties. He was still using a crutch.

Then one upon another, like logs in a log cabin, Ernie laid the ties, hammered them together with railroad spikes, and chinked them with cotton packing. Plaster cement put in the seams and ends made a neat finish. The ceiling he beamed with bridge timbers and telegraph poles, in which holes from the linemen's spikes are still visible. The lifting of these huge timbers was almost a giant's job, and it was only then that Ernie enlisted help. He was still using a crutch. For many hours he pulled and stacked and hammered with a crutch under one arm. But after a few weeks, he discarded it.

First the living room was built. For 60 days these two worked to complete livable quarters before the heat of the summer would make work outside impossible. They moved into one room on their wedding anniversary—March of 1936.

That first year Esther cooked on an old wood range. Ernie took out one window for the chimney. The fireplace opening Esther used for a dish cupboard. One of the ties had a hole completely through it, and the idea came to Ernie that this hole would permit a drain-pipe for a sink, and so running water made their temporary cooking quarters more livable. He put a barrel on the outside, and hauled water three miles while they were putting down their own well. The well-rig was made from old tractor gears and part of an old automobile frame which were salvaged from the desert.

Then Ernie built a long table and benches of flooring, and polished the table to a mirror-like finish. Having no plane or sandpaper, he used a piece of broken glass. The benches were upholstered in gay chintzes by Esther. They seat 12, and she made dinner and breakfast sets of damask with edges of bright red and white checked gingham. Checkered red and white gingham also adorn the windows of the kitchen.

The next year Ernie put an old Ford gasoline tank on the roof, which had to be filled by hand with buckets, and piped the water down into their shower and lavatory. If the water is not piping hot, it is pleasantly warm for a good shower bath.

Now two tanks repose atop the house for the several showers in the separate rooms—one hot and the other cold. The solar heating system also is attached to the range to provide hot water on cold winter days when the sun does not get warm enough.

The second year the kitchen and bedroom took shape, and all ends were left unfinished so that additional rooms could be added if desired.

The floors are cement, covered by hooked and braided rugs made by Esther. There are 12 hand-hooked rugs and innumerable braided ones. Dainty curtains are in the showers and dressing-room; ex-



Ernie walked with a crutch when he came to Dateland—and now he puts long hours in his flower gardens.

cellent inner-spring mattresses, and thick, soft wool blankets on the beds.

The sunporch and patio porches have floors of flagstone, taken from abandoned cabins on the desert 15 miles away. They were broken into pieces and cemented together.

Five thousand quart oil cans were used to shingle the roof of the living room alone. Procured from filling stations both far and near, Ernie and Esther worked weeks cutting off tops and bottoms with can openers and tin shears. The remaining parts were flattened into shingles with a hammer and an old tie for a base. Then up a ladder went both Esther and Ernie, and on the ties which formed the ceiling, the tin shingles were nailed into place. Over

these, six inches of dirt was thrown, drawn up by buckets from the trailer.

Being a novice at carpentering, Esther put her shingles on wrong. She worked for hours, unnoticed by Ernie, laying them from top down instead of working from the eaves upward so they would overlap and shed water. When Ernie returned from a hauling trip and discovered what she had done he grinned and suggested that either she would have to change the shingles or they would need raincoats and umbrellas to live in the room beneath.

Throughout the construction, inside and out, every piece of wood and stone came from the desert. Cobblestone for the fireplace of volcanic rock, Ernie hauled 17 miles in a two-wheeled trailer.

Outside, ironwood trees grow at the end of each angle, and tamarisk trees surround.

The soil will grow a garden, too. Table vegetables fresh from the garden are a delight to the guests. Here Esther picks broccoli, tomatoes, green peas and beans, carrots, turnips, beets, and spinach. Tomatoes mature early in December. Now 100 date palms have been added. But it wasn't the dates that hit the jackpot and made a small fortune for the Seyfrieds.

No home can be complete without the flowers that brighten the rooms with gay bouquets—not even excepting a desert home. Esther planted petunias, stocks, and marigold close to the house under the ironwood and tamarisk trees. In the rich, sandy loam they flourished beautifully.

But the pride and joy of Ernie's heart were his exquisite white gladiola which he planted as a border along the V-shaped entrance to the house.

As the years went by Ernie experimented with one thing or another in attempting to make his desert place pay. Tomatoes were a good idea, but the rabbits got the young plants. House guests were nice to have, but the idea of Esther spending the rest of her life in the kitchen worried him, even if their friends felt there would be something missing in their lives if they would be deprived of the good fortune of partaking of Esther and Ernie's hospitality and the delight of their home.

One day a visitor from Phoenix, admiring Ernie's white gladiola, mentioned the difficulty of getting fresh cut flowers during the winter months. If Ernie would grow an abundance of these flowers, he felt certain there would be a good market in Phoenix and Yuma.

Ernie thought that one more experiment could not harm, so the following fall they planted one-third of an acre in gladiola bulbs. Irrigation was not a problem, for he had his water. The plants flourished. There were not the problems of other localities. No lath houses were necessary. There was no anxiety over the weather, for on the desert in winter time the climate is moderate. Sometimes the wind will blow furiously, but consider the lilies in the field—they have nothing on gladi-



Esther Seyfried in the flower garden that gives a colorful setting to the house of railroad ties.

olas. Seven hundred blossoms alone were picked on the last day of the season. The wealth accrued was beyond their wildest dreams. For they had made as much in three months as many people make in three years! For the first time in ten years, after passing the sixty mark, these two untiring people could draw a breath of relief; for the first time they were out of the red.

If the days were filled with drudgery and tedious work, there was compensation, for as evenings drew near and the shadows

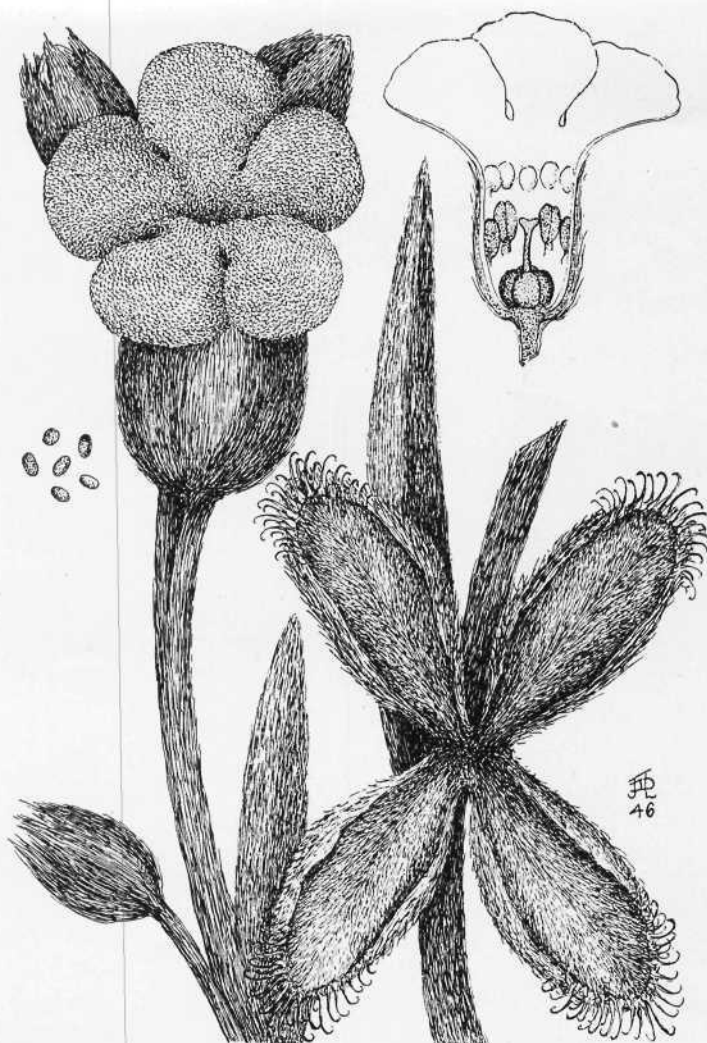
lengthened, the soft mauve and coral colorings of the landscape were a delight to behold. They would gaze out over the wide-spreading desert dotted with mesquite and clumps of cactus and ironwood trees splashed with the yellow of the palo verde trees, to the distant mountains, purpling in the evening haze. Here and there the flaming ocotillo and the lacy tamarisk with plumes of lavender mingled with the butter yellow of the palo verde blossoms. The faint breeze carries spicy scents of sagebrush and faint mingling of underbrush in hot sand.

In their years of pioneering on the Arizona desert the Seyfrieds have discovered the truth that—

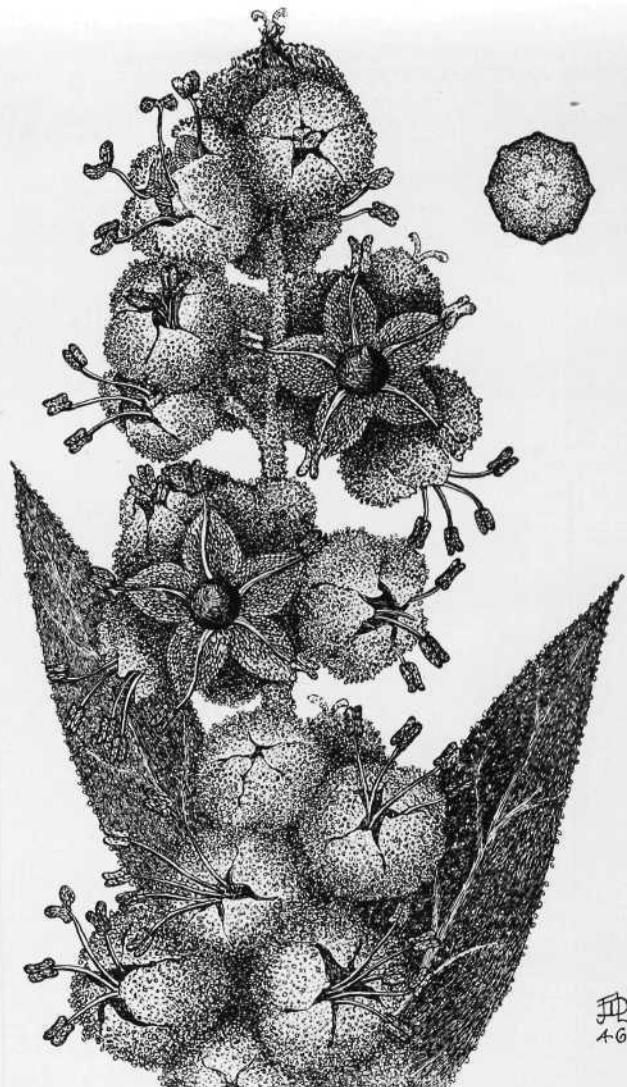
"To those who come to the desert with friendliness, it gives friendship; to those who come with courage it gives new strength of character. Those seeking relaxation find release from the world of man-made troubles; for those seeking beauty, the desert offers Nature's rarest artistry. This is the desert that men and women learn to love."

With water, the Arizona desert produces luxuriant flowers. Here Ernie picks the first gladioli of the season.





Pectocarya penicillata (no common name). This tiny white flower is about the size of an ordinary pin head or two millimeters across. The x-shaped object on the stem which looks like a decoration from an illuminated manuscript is actually the fruit.



White pigweed (*Chenopodium album*). One of the commonest of introduced weeds but beautiful for all that. Flowers are greenish and about 1/16 inch across. It is found in Arizona and in widely separated areas over the world.

Pigmies of the Plant World

By JERRY LAUDERMILK

Drawings by the Author

WHERE the unaided eye saw just a reddish haze over the cracked soil, my pocket lens showed a host of delicate plants of curious shape with stems, leaves, flowers and fruit all packed into vegetable midgets no bigger than the first two joints of my finger. Instead of being any regulation shade of green they were all tricked out in red, brick-red and pink on the stems and a carmine-like granulated ruby on the tiny flowers.

Even my friend Joe Aguilar, who, out of long experience on the Arizona desert had a name for just about everything, could not help me out in this case. In fact, he suggested that such an insignificant member of the vegetable kingdom was probably nameless. I felt pretty sure this was a bad guess. Some other snooper armed with a magnifier and a knowledge of botany had

Covering the floor and slopes of the desert country during many months of the year is a gorgeous display of bloom that few people ever see. This is the world of pigmy flowers—a world in which a blossom 3/16 of an inch across is oversize. Jerry Laudermilk estimates that one-fifth of the flowers in the Southwest are in the pigmy class. It is an interesting world, as you will discover in reading Jerry's story of what he discovered when he began sleuthing around with his microscope.

almost certainly provided the plantlet with an impressive Latin title and filed its description away somewhere.

To make a long story short, my red midget put up a brilliant fight against

identification but finally gave in. It proved to be a species peculiar to the extreme West, frequently growing on sunstruck ground from Oregon through California and southern Arizona, and oddly enough it occurs again down in Chile. The scientific label for this particular species is *Tillaea erecta* and "believe it or not" its common name turned out to be Pigmy-weed. No plant could have a better claim to the title.

My drawing shows some of the characteristics of pigmyweed as it appears when highly magnified. The red coloring material that fills many of the cells is a peculiar substance belonging to the compounds called *anthocyanins*. These are the cause of the reds, blues and lavenders of some of our most beautiful flowers—also of red cabbage and black beans.

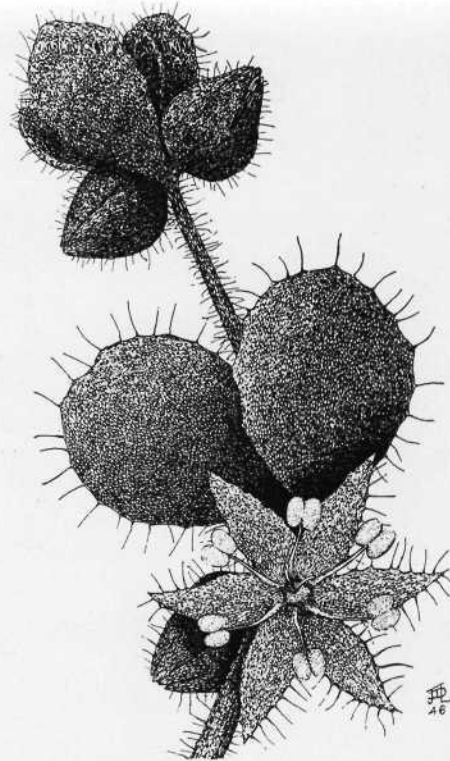
Since my identification of the red pigmy had provided such a fascinating pursuit, I began to hunt for other flowers on which to try my new hobby. The challenge was



Purslane (Portulaca oleracea). Tiny bright yellow flowers are one of the few exceptions to the rule that most pixy flowers are white or pale colored.



Croton californicus (no common name). One of the strong-charactered Spurge family. The blossoms are typical examples of flowers without petals.



Pterostegia drymarioides (no common name). A beautiful little rose and green flower of the buckwheat family; common but hard to see. Flowers are about twice pin head size.

immediately accepted by plants of all sizes. The big ones were not particularly difficult. It was the denizens of Lilliput that required long hours with the microscope. I began to notice pixy flowers in all sorts of places. Some were the blossoms of bushes and trees which until now I had taken for granted as rather messy-looking tassels dangling from the ends of twigs. Others were the microscopic flowers of herbs that were only midget-size from root to top. In some cases they were so tiny that

it would have taken a dozen to make a decent corsage for a cricket. But these were true flowers with as much beauty in their design as any yucca or wild rose.

In this game of plant identification, the only way to a sure conclusion (unless you cheat and ask somebody) is to take your flower to pieces and study the parts until you are familiar with its makeup and then run it down with the help of a good wild-flower manual.

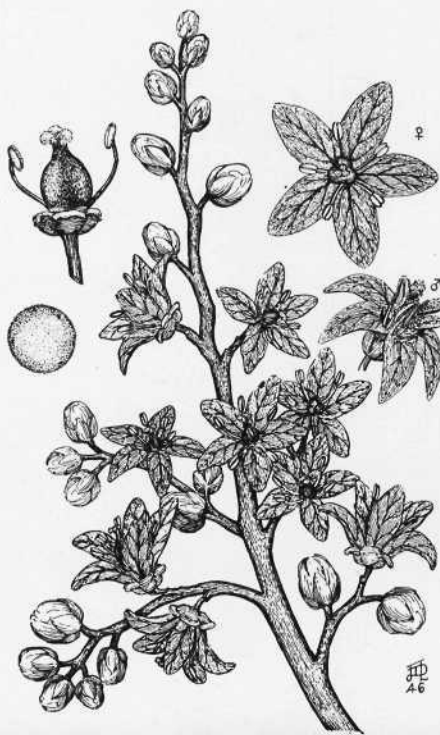
The world of pixy flowers bristles with

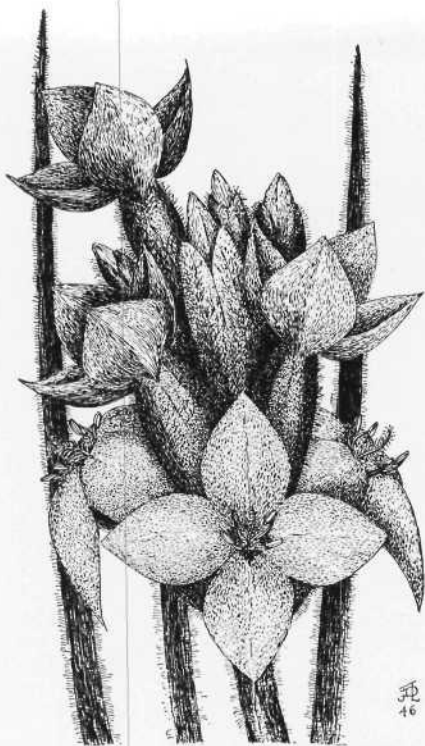
interrogation points that await the explorer in unexpected places. What tricks do these flowers use in order to succeed? What guests do they entertain? What attractions do they offer insect visitors? What significance is to be attached to their choice of places to grow? Do they indicate soil with peculiar chemical qualities—acid, alkaline or otherwise? In many cases there is no ready answer since botanists have not yet gathered up all the loose ends to their problems.

Squaw bush (Rhus trilobata). The petals of the cream-colored flowers are about 2 millimeters long. They grow like a cluster of tulip-magnolia flowers on a hairy twig. Beautiful.

Poison oak (Rhus diversiloba). Left, a pollen grain and a seed capsule with vestigial stamens. Upper right, a female flower; below, a male flower with anthers and pollen.

Chickweed (Stellaria media). The fully opened flower is about 3/16 of an inch across. Upper left, a seed capsule with a stamen and one of the curiously cleft white petals.





Plantain (*Plantago hookeriana*). An elegant little flower with papery, whitish flowers which depend upon the wind for pollination. Total width of the open flower is about $3/32$ of an inch.



Euphorbia melanadenia (no common name). This curious little flower is common on dry slopes and mesas. The tiny flowers are rather noticeable from their white and purple contrasts.



Bedstraw (*Galium aparine*). Beautiful and delicate flowers like tiny stars of white enamel. A single flower would just fit on top of a pin head. Upper left, cross-section of stem.

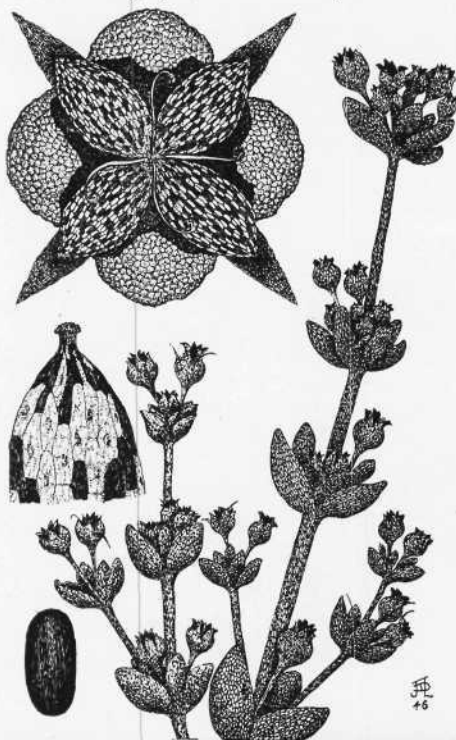
With few exceptions the pixy flowers are white or very light colored and even many of the very smallest have their favorite insect patrons who do the important work of carrying pollen from plant to plant. In the case of the red pixy it was a long time before I learned how it handled this problem. I searched stands of *Tillaea* at all hours of the day and night to learn who called and when. During the heat of the day the ground beneath the plants was traversed by processions of ants that ig-

nored the flowers entirely and this appeared true for other insects that passed that way. It was the same at night. A few inconsequential gnats were loafing around but doing nothing useful. Then one noon when a stiff breeze blew I saw each tiny plant shaking like a pigmy tree in a miniature forest. I arranged a dozen microscope slides smeared with glycerine to act as dust traps in strategic places down-wind from the midget forest. After an hour I examined my traps and every one showed from

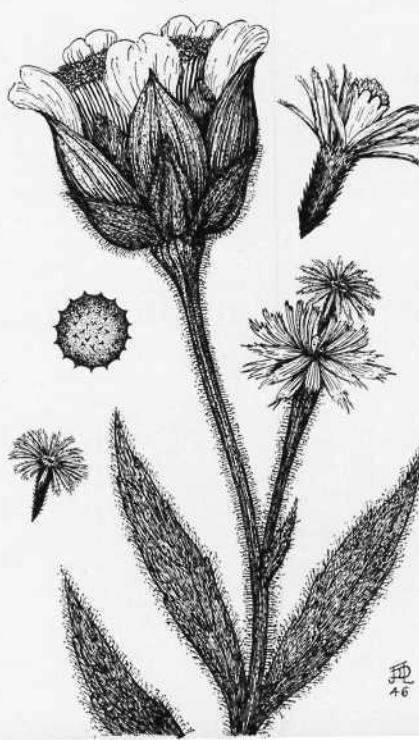
a few to many pollen grains of the pigmyweed. This was one question to be scratched from the list for it was clear now that the wind was the go-between for the pixies in red.

Here is a chance for Desert readers to take up a new hobby combining all the attractions of esthetic appeal, sleuthing, puzzle solving and hours in the great outdoors. Simply buy yourself a good Western wildflower manual and a magnifier and you have the keys to Elfland.

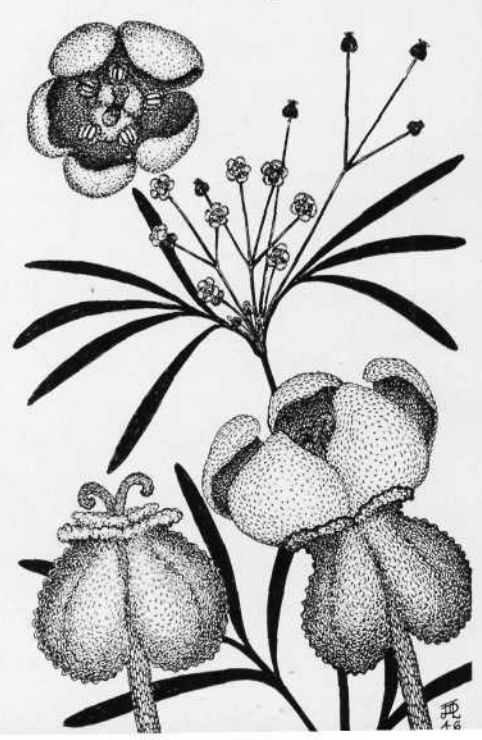
Pigmyweed (*Tillaea erecta*). Upper left, open flower would fit loosely inside a circle the size of a pin head. Seeds, bottom left, ripen in four boat-shaped carpels. Tip of style is shown greatly magnified at middle left.



Galinsoga parviflora (no common name). This might be a midget artichoke about 3 millimeters high. The small flowers of this weed, rather common along irrigation ditches, are extremely attractive.



Apiastrum angustifolium (no common name). A delicate, white flower which will just fit loosely into the top loop of a letter g in this caption. Flower, upper left. Bottom, flower in profile and views of seed capsule.



It was hot in Searchlight, Nevada, on the night of August 29, 1946. Editor-Publisher Howard E. Mildren worked late in his self-built concrete block printshop and office. The old mining camp had been without a newspaper for 30 years, and he was making up the first issue of the Searchlight Journal. The town had just suffered the second-worst fire in its long history, which burned down the biggest gambling club in town, the hotel and a grocery. There was plenty of news for a new paper.

Mildren put the last form on the ancient Campbell press. He had bought that press in Kansas City and had dissected it there himself, so that he would know how to reassemble it in Nevada. Make-ready completed, he turned on the power. The press rumbled, clanked in a tired sort of way—and stalled. Mildren backed it up by hand and tried again with the same result.

The potential editor also was new at the printing business, and the stoppage baffled him. An hour before the press had been running smoothly. Then he realized that before, the press had run empty. The motor had sufficient power to run an empty bed, but it could not turn the press when impressions had to be made.

Berta Silveira and her husband, "Big John," deputy sheriff at Searchlight, came to the office to find out why the paper was delayed. Berta, long-time resident of the town, was local news editor of the new Journal, in addition to being Searchlight postmistress. Editor Mildren's friendly grin was missing as he explained his trouble. "Big John" Silveira circled the old press, eyeing it contemptuously from all angles. Then he grunted and stripped off his shirt. He picked up an iron bar and thrust it into a hole in the flywheel.

"You feed it, I'll turn it," he said. It was slow, hot work and the night was almost gone before the last copy of Mildren's paper came off the clanking press—but he had made his beginning at Searchlight.



Sinah and Howard Mildren with one of the large broken geodes in the field.

eyes told me that I had found a fellow rockhound. He reached for his hat. "I'll show you," he said. He slapped the hat rakishly on his head, shut the office door, and the Journal closed down for the morning.

"I've heard about huge geodes, but I haven't seen them," Mildren said as we drove toward his home. "Those I am going to show you are big enough for me." He explained that the field lay on perlite claims owned by Clyde and Junior Cree of Searchlight, but that the Crees had permitted collectors on the property in the past.

"I'm no judge of geodes, and not all these have good centers," Mildren went on. "My wife and I are only amateur rockhounds, but we like them and when I had the Boulder City Prospectors' club out here, they seemed satisfied."

Mildren's home is perched on a sidehill. The varied collection accumulating on all sides of it indicates that he is suffering from acute rockitis. Fortunately his wife, Sinah, contracted the disease when he did. Sinah is also a member of the Journal staff, acting as advertising manager. Sinah and Howard come from Ohio, where they married after his discharge from the army. She has accepted the desert with the same enthusiasm which Howard shows. Each weekend finds them at the end of rutted by-roads, hunting rocks and scenery.

We obtained Clyde Cree's permission to investigate the geodes on his claim, set the speedometer at zero where the Nipton road leaves Highway 5 in Searchlight, and headed west toward Nipton. At 1.1 miles we turned south along the power-line road, leaving it at 1.5 miles for another dirt road which extended in a straight line toward the Piute mountains in the southwest.

Joshua trees were scattered through the valley, part of the big forest lying between Searchlight and Nipton. Mojave yucca was plentiful and there were Lycium, creosote bush, burroweed and deerhorn cholla visible. Mildren pointed out the big ranch so long operated by Rex Bell and Clara Bow, to the north at the base of Crescent peak. The road we followed was remarkably straight.

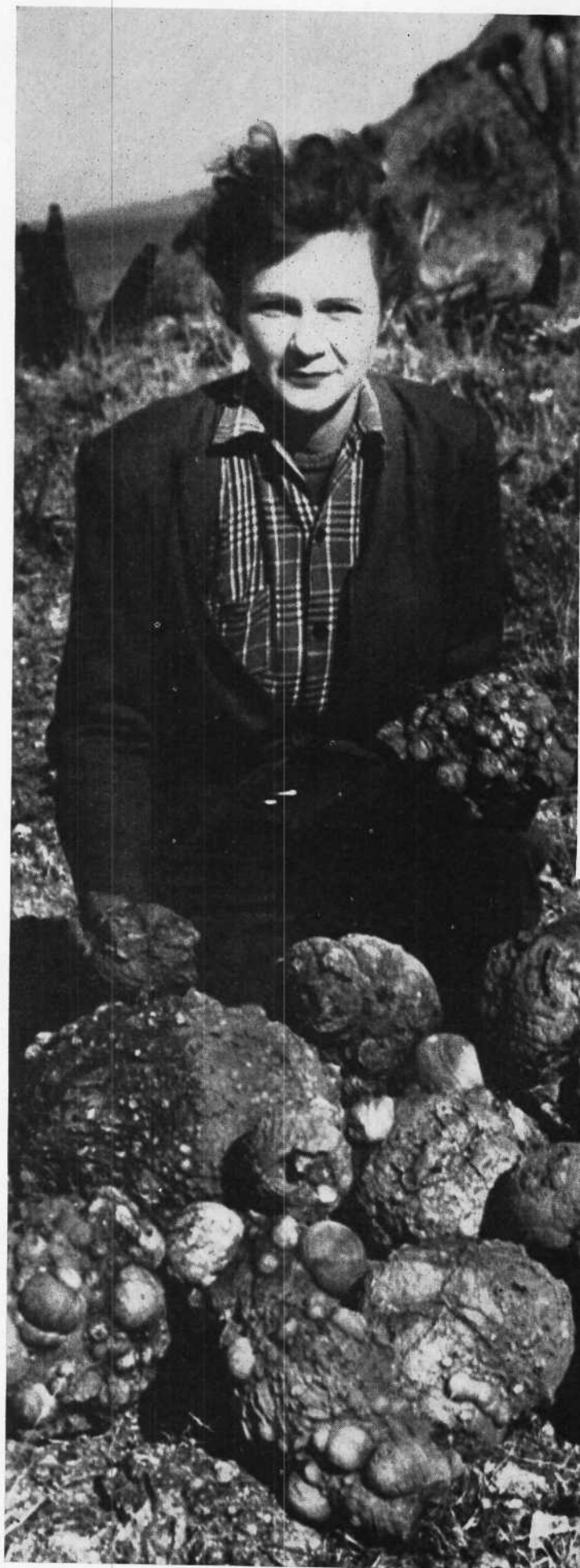
"We are on the old Santa Fe roadbed," Mildren explained.

Geode Hunters of Searchlight

By HAROLD O. WEIGHT

*I*T was January, 1947, and the weekly Journal had reached the ripe age of 20 issues, when I came to Searchlight. I was checking a story about geodes "as big as houses" which were reported to have been found in the isolated southern tip of Clark county, Nevada, lying between the California line and the Colorado river. And because a small town editor is supposed to know everything about everything—and usually does—I went to see Mildren. He was busy in the editorial office, which meant that no one was working in the printshop. Had the printshop been in operation, the editorial department would have been vacant. The Journal really is a one-man paper. The body type is set in Boulder City, but Mildren does everything else. He even has succeeded as pressman after obtaining a more powerful motor.

When I asked about geodes, the sudden sparkle in Mildren's



"The line ran during boom days, but was taken out in 1924. It looks smooth, but don't speed on it until you know it by heart. Here's why."

He swerved the car off the embankment into ruts which slanted down into a wash and up to the roadbed on the other side. Floods had cut a clean break in the railroad embankment.

"There's no warning. You could plow right into one of those holes," Mildren said, "and there are a dozen in the next seven miles. You have to keep an eye open for the detours."

We left the Santa Fe roadbed at 10 miles, swinging left. At 11.1 miles Mildren showed me obsidian lumps which were scattered over a bluff and its slopes to the right of the road. They were typical "Apache tears" and should polish well. We had been climbing steadily since leaving Searchlight which itself is at an elevation of 3560 feet, and were heading into Piute pass.

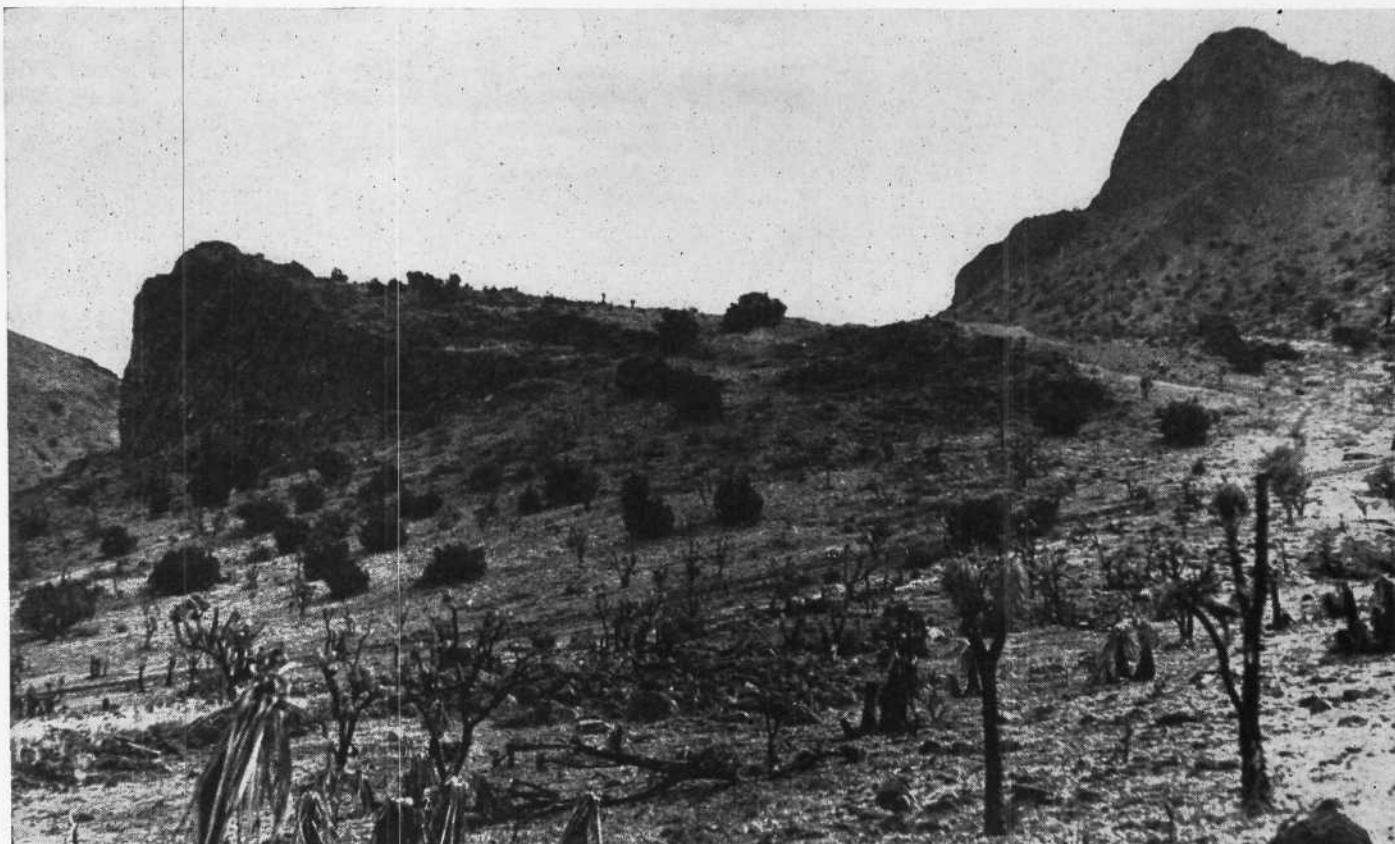
At 12.9 miles we branched left into a small valley almost surrounded by spectacular buttes and peaks, chiefly of Tertiary volcanics. Only one thing marred the beauty of the spot. A recent fire had swept the center of the valley, killing Joshua and Spanish bayonet, and burning the juniper.

The road headed for a small but abrupt bluff on the southern side of the valley. At the foot of the bluff, 14.1 miles from Searchlight, we pulled off the road and parked. So far as I could determine from maps available, we were just about at the point where the Piute and Castle mountains join, probably along the California-Nevada line.

The road winds steeply from the point where we parked to the perlite deposit on top of the bluff, a few hundred yards beyond. This is a private road, built by the Crees. No one visiting the field should attempt to take his car to the top of the bluff. The Crees generously have agreed to permit Desert Magazine readers to collect geodes on their claims if they do not interfere with the work or damage roads or property. One careless or greedy visitor could cause the field to be closed to all collectors.

Sinab Mildren with typical geode specimens gathered in the field near Piute pass.





Butte on the left marks Piute pass geode field. Geodes in this area are concentrated on the bench on top the butte, and on its eastern slope.

Principal outcropping of geodes in this area is on the eastern slope and top of the bluff. We reached it by following the main wash east from the parking spot, swinging south up the little gulch which drains the bluff's eastern slope. Bits and chunks of white and colorless chalcedony, which proved to fluoresce a strong green under ultraviolet light, were scattered about. At 500 yards, we found geodes lying thickly on the surface.

There probably is no field in the world in which geodes show more varied exterior shapes than they do in this area. We found smooth ones, bumpy ones, pitted ones and beaded ones. Some looked like overstuffed softballs, others were marked with lines and whorls. Some were distorted into shapes I had never seen before. Twins and triplets are common. In diameter the geodes range from one inch to three feet and better.

Some specimens are solid rhyolite. We selected ours by attempting a rough estimate of specific gravity, taking those which seemed light for their size on the theory that they must have hollows. Of a dozen chosen by this method, sawing revealed ten with openings, one nodule filled with common white opal, and one dud.

Most of the geodes tested were partially filled with white banded or botryoidal chalcedony, which also fluoresced green. Some have perfect chalcedony roses inside. The rhyolite matrix—in ringed and banded reds, browns, tans and grey-lavenders is highly silicified and would polish well. But there must have been a shortage of silica when the centers were formed. In many the coatings are thin and in some there are only hollows in the rhyolite.

Noon came quickly, and we returned to the car with all the geodes we wanted. As we ate lunch we discussed geodes. Howard Mildren picked up a particularly misshapen specimen.

"I'd like to know just how these things form," he said.

And that is a question. I imagine that there are as many theories regarding formation of nodules and geodes as there are individuals collecting them. Most collectors agree that something made a hole and something filled it up.

The most widely accepted theory is outlined in *Quartz Family Minerals* by Dake, Fleener and Wilson. A cavity was formed by a gas bubble, or other method, in volcanic rock with high silica content. This cavity was filled with "mud" made of disintegrated rhyolite when magmatic waters were active. The mud ball dried out, leaving a star-shaped hollow in the center while the outer surface conformed to the shape of the hole filled. Later, percolating silica-bearing solutions deposited the filling which gradually crystallized, or evaporated to form agate or chalcedony.

Accepting this theory, there must have been a strong earth movement in the Nevada field when the rhyolite mud was not quite hardened, which crushed the geode shells in upon themselves, creating the fantastic shapes so common at Piute pass.

In the afternoon, we scouted the territory surrounding the perlite claims. We found much chalcedony float and more obsidian of cutting quality. There were a few small patches of geodes, usually in association with perlite. The area would repay exploration by rockhounds. And Mildren found a nearly perfect Indian arrowhead. One of the members of the Prospectors' club also had found one, he said. Possibly the area was an early hunting ground.

There appeared to be an unusually wide variety of cacti on the slopes, and I recognized cholla, grizzly bear, beavertail and deerhorn.

As we walked, Mildren talked of his newspaper venture. During the war he served in Persia, Egypt and India, and acquired a liking for desert country. With Sinah he came to visit an aunt in Boulder City. She was interested in rocks and the Mildrens soon were sharing her enthusiasm.

"I saw Searchlight in the spring of 1946. Building going on all over the place and 700 population. It was the Nevada town nearest Davis dam camp and was it booming! People thought the workers at the dam would like a chance to gamble. I'd had a little newspaper experience and thought I'd like the work. And Searchlight certainly looked like the place to start one."

He grinned. "I knew nothing about printing. When the first font of type came, I looked it over. I said to Sinah, 'There are a lot of pretty things here, but what are they for?' But I put the type in cases and cardboard boxes and started learning things."

Among other things, Mildren learned not to depend on a Searchlight boom. Since discovery of the first ore in 1897, the old mining camp's boom and bust record looks something like the fever chart of a malaria patient. The Davis dam excitement passed. Workers didn't visit Searchlight in numbers expected. Many of the new gambling clubs were never completed. The population sagged back to 200.

The passing years have frequently brought Searchlight to what was presumed to be its death bed, but the old town has stubbornly refused to become a ghost. The oldtimers are confident today. A new boom of some kind will come. It always has. And certainly there must be a future for a town which refuses to die. Editor Mildren thinks that it may lie in the town's development as a fishing and resort center when the lake behind Davis dam is completed. Searchlight will be close to the lake and due to its altitude, will be quite comfortable in the summer.

The history of Nevada is crowded with short-lived journalistic

enterprises. But in the early days, when the boom broke the editor packed his equipment and headed for a new rush. Howard Mildren has built his office of concrete. He has faith in the future of Searchlight and does not intend to move on. If the town is not quite able to support a paper now, he is certain that soon it will be. Until that time, he is willing, if it becomes necessary, to enter other fields to keep things going. The rock business appeals to him, with the bright possibility of making a living out of a pleasurable hobby. He might even, on those trips to isolated canyons, strike something of commercial value. He brings rocks back from each trip, crushes and pans them.

The sun was low when we left the geode field, and the shadows enhanced the beauty of bluff and mountain. It had been a successful day. The geodes alone would have repaid the trip, making interesting additions to any collector's cabinet. While the field is small there should be enough for collectors for a long time as the specimens are not varied enough to tempt anyone to collect in quantity.

One thing is certain. The Mildrens may be beginners at publishing and amateurs as rock collectors, but they already are graduate lovers of the desert. They intend to stay on it.

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EPITAPH STILL PUBLISHED IN HISTORIC TOMBSTONE

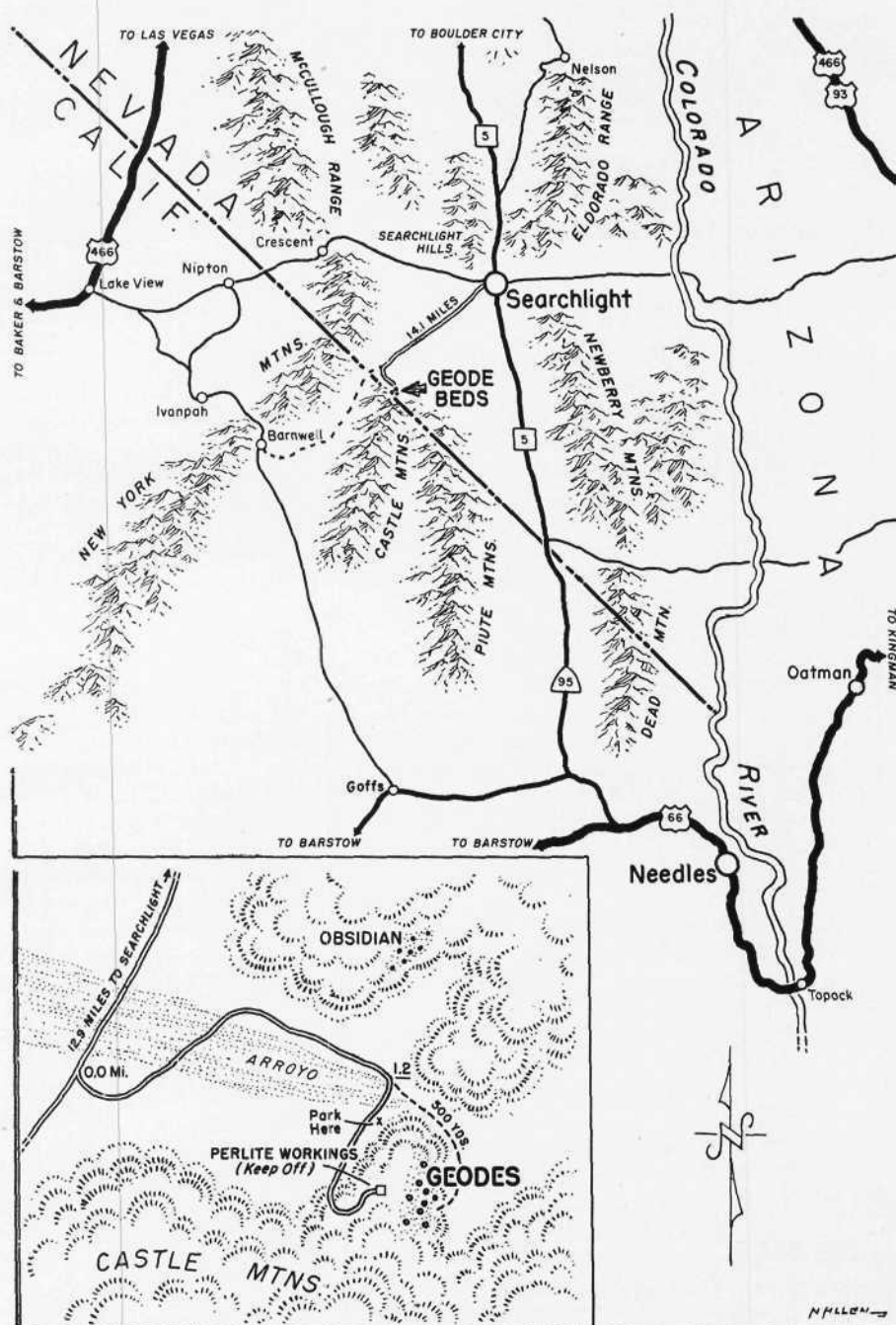
The Tombstone *Epitaph* on May 1, 1947, celebrated 67 years of continuous publication in the historic Arizona silver camp. Newspaper was founded in 1880 by John P. Clum, famous as the Apache agent who captured Geronimo and as mayor of Tombstone during the period of the Earp-Clanton battle. First issue of the paper was put out in a tent on Fremont street across from the city hall. It was printed on a Washington hand press—the first press in Arizona—which had come around the Horn to San Francisco and was freighted to Tubac where it was used to publish the *Weekly Arizonian* in 1859.

Epitaph is only survivor of a number of newspapers once published in Tombstone. Some years ago it was consolidated with the *Prospector*, its chief rival during the boom days. For years, while mining was at its peak in the camp, both papers were published daily. With the decline of the camp, due to quantities of underground water tapped in the shafts, the *Epitaph* became a weekly.

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COLORADO RUNOFF IS 96 PER CENT OF NORMAL

Weather bureau's May forecast of Colorado river basin water supply indicates satisfactory conditions, with slight upward revision for Green and upper Colorado rivers. Lake Mead inflow is expected to be 96 per cent of 25 year normal. Annual runoff of the upper Colorado will be 5 to 10 per cent above normal; Gunnison 91 per cent of normal at Grand Junction, with 25 per cent shortage in Uncompahgre basin. Dolores will be 20 per cent below normal while the Green at Greenriver will be 15 per cent high. Yampa river will have 20 per cent above normal runoff. Los Pinos basin is expected to have only one-third normal flow while the whole San Juan basin will be short about 40 per cent.



Golden Desert Poppies

By MARY BEAL

FAR AND WIDE the California Poppy is known as the floral representative of the Golden State. Up and down the length of its domain in early days, its golden glory was spilled by countless millions over vast stretches. These brilliant carpets were breath-taking for glowing color and immensity. As cultivation of the land increased, the far-reaching flowery tracts diminished until now there are only scattered areas of showy Poppy fields. The desert claims one of the finest, spreading its flaming miles of lustrous orange in Antelope valley, the western arm of the Mojave desert.

Old-time Spanish-Californians gave it several poetic names, *Copa de Oro* (Cup of Gold) the most common, *Amapola* (Poppy), and *Dormidera* (Sleepy One) because the flowers unfold only in full sunlight. The name *Eschscholtzia californica* was given the plant in 1816 by Adelbert von Chamisso, poet and botanist of the Russian Kotzebue expedition, in honor of his good friend and companion, Dr. J. F. Eschscholtz, surgeon of the scientific party, also naturalist by avocation.

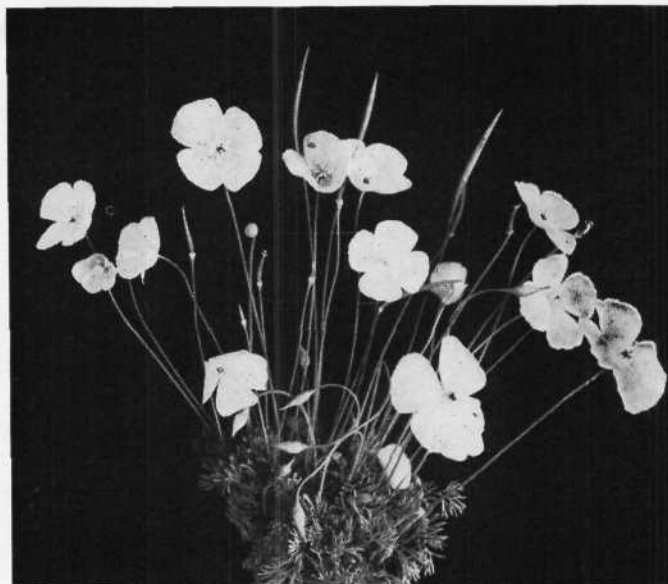
We value the California Poppy as one of the loveliest blossoms to grace the earth. All over the world its seeds have carried glorious color to enhance cultivated gardens. In addition to beauty it has a record of utility. The Indians cooked it for greens and used it medicinally—as an emetic, to relieve colic, headache and tooth-ache, and also as a poultice to apply to sores and ulcers. Spanish-Californians concocted a hair tonic by cooking the plant with olive oil or bear oil and adding a pleasing perfume, which aid to the growth of lustrous hair is supposedly still in use. The watery juice of the *Eschscholtzia* species has mild narcotic properties, similar to opium but without objectionable effects. A drug extracted from this Poppy is reported to be used in medicine as a substitute for morphine, providing a harmless remedy for insomnia, headaches, and other ordinary aches and pains, especially useful for the ailments of children.

The *Copa de Oro* is an extremely variable species, and some botanists have named as many as 40 varieties, but because of so much intergrading only a few are in general use. The variety *crocea* is the most common, favoring the interior valleys, and is the one that lights up Antelope valley with blazing color.

Eschscholtzia californica var. *crocea*

This popular flower is a perennial with leafy, branching stems rising 8 to 18 inches or more from a stout taproot. The attractive herbage is pale blue-green, smooth and hairless, and frosted with a bloom, the long-petioled leaves dissected into very narrow lobes. The large, rich-orange flowers, 3 or 4 inches across, crown rather long peduncles, the corolla a deep, flaring cup holding in its heart numerous golden stamens, the four satiny petals with an incomparable sheen. The two sepals unite to form a conical, long-pointed cap which encloses the furled corolla in bud, the expanding petals pushing it up and off as they unfold. The very slender, ridged capsule is 2 to 4 inches long, filled with many very tiny globose seeds, the surface net-like. On the flat opposite Wild Horse Mesa in the eastern Mojave desert is a variety with lemon-yellow petals marked at the base with a large orange spot, sometimes a third the length of the petal, which usually is about 1½ inches long. Its abundance adds an enchanting radiance to that region of luxuriant flowering, especially charming when complementing the blue and purple hues of the sage often called Ramona.

Throughout western and southern Arizona and Sonora flourishes a species similar to *E. californica*, often intergrading with it, *Eschscholtzia mexicana*. It displays the same exuberant habit of splashing its brilliant color over large areas and may be found in bloom from February to May.



Mojave Poppy is an annual and smaller than the perennial California Poppy. Mary Beal photo.

The most widespread species of Golden Poppy on the desert is generally called Mojave Poppy—

Eschscholtzia glyptosperma

You can't go far on the Mojave desert without seeing the Mojave Poppy, often in lavish prodigality. Smaller than the California Poppy and not as flaming, yet it contributes much radiance to the spring flower show. An annual, growing from 3 to over 12 inches high, the numerous scape-like flower-stems rise erectly well above the short, dense, basal tuft of leaves, finely divided and re-divided into short, narrow, crowded lobes. The clear yellow blossoms are ½ to 1 inch long and often borne in amazing profusion. A few years ago I found a plant with 35 open flowers, 40 buds and 36 seed pods, and in the crowded density of the basal portion I could easily have overlooked a few newly-formed buds. However a total of 111 long-stemmed blossoms is a good record for any small annual. It conforms to the specific custom of doffing its cap when the petals are ready to unfurl, the slender capsule is 2 or 3 inches long, its many seeds deeply pitted. The range of the Mojave Poppy extends into western Arizona, southern Nevada, and southwestern Utah, blooming from March to May.

Eschscholtzia minutiflora

This tiny-flowered annual has several, or many, leafy branching stems 4 to 12 inches high, often as broad or broader, like a lacy, miniature, fairy bush, dotted with exquisite little yellow blossoms. The leaves follow the genus practice of division into narrow lobes but the flowers are not cup-like and are only ⅛ of an inch long, more or less. It thrives on dry slopes, plains and canyons of all California deserts, western Arizona, Nevada and southern Utah. A larger-flowered variety, *parishii*, grows in the same areas, its petals being ¼ to ½ inch or more long. Lovely assemblages of this species are found in all parts of their wide range.

Mary Beal is convinced, as the result of recent trips, that the far reaches of the Mojave desert have been blessed with more flowers, this year, than her own home area near Barstow. Blooms along the Cave springs road were about average, but north slopes of the Kingston mountains were covered with more flowers than she has seen in years. Most spectacular were the Parry Nolinias. She also found splendid Mojave asters of beautiful size and color, luxuriant *Senecio* and *Stenotopsis* bushes, quantities of Palmer Pentstemon, scarlet paint brush, incense bush, and innumerable small fry.

Here Are the Cover Winners for '47 . . .

A lonely yucca growing in the dunes of the White Sands national monument in New Mexico furnished the subject for the first prize winning picture in Desert Magazine's annual cover contest which was judged on May 20. The winning photographer was Hubert A. Lowman of Southgate, California.

Second place winner in the cover contest was Don Ollis of Santa Barbara, California. The picture—an oblique shot of a lizard perched on decomposed granite in the Wonderland of Rocks area in Joshua Tree national monument, California.

The two winning photographs will appear on the covers of future issues of Desert Magazine.

In addition to the prize winners, for which cash awards of \$15.00 and \$10.00 were paid, Desert's staff selected 11 non-winning prints for future cover use. Contestants were paid \$5.00 each for these prints.

There were 150 entries in this year's cover contest, submitted by 47 photographers. About half of these were eliminated for more or less general reasons. Coarse grain was the most common fault. Other defects included lack of sharp focus, poor lighting, composition that did not make allowance for the masthead to be printed on the cover, and lack of strong contrast. A few horizontal prints were eliminated automatically because vertical pictures were required.

Not all the pictures rejected were guilty of the above defects. It was necessary to return many fine prints simply because Desert's cover contest is an annual affair and too large an accumulation of cover pictures is not desired. With so many fine

prints from which to choose, the judges' task this year was a difficult one.

The following non-winning prints were purchased for future covers:

Desert Pack Animal (burro), taken on the Papago Indian reservation in Arizona by Donald W. Johnson of the U. S. Veteran's hospital at Tucson.

Tabquitz Canyon Falls, taken near Palm Springs by Nicholas N. Kozloff of San Bernardino, California.

Soda Wagon, taken at Keeler, California, by Don Mohr of Los Angeles.

Navajo Girl, taken in Monument valley by Martha Burleigh of Los Angeles.

Fray Garces Monument, taken at Yuma, Arizona, by M. L. and M. H. Carothers of La Jolla, California.

Morning on the Desert, taken in the Joshua Tree national monument by Harry Vroman of Lawndale, California.

Saguaro, taken in Saguaro national monument by George Olin of Nogales, Arizona.

White House Ruins, taken in Canyon de Chelly national monument, Arizona, by Hubert A. Lowman of Southgate.

Home of the Navajo, taken in Canyon de Chelly, Arizona; *Chili-Child*, taken in San Ildefonso pueblo, New Mexico; and *Penitente Country*, taken in Santa Cruz valley, New Mexico—all by Loey Ringquist, Santa Fe, New Mexico.

Unused photographs have been returned to all contestants who sent return postage. The others will be held for instructions.

VETERANS HAVE PRIORITY FOR YUMA HOMESTEADS

Applications for homestead farms on Gila and Yuma projects, near Yuma, Arizona, will not be accepted until after public notice is issued, E. A. Moritz, director of reclamation bureau Region 3, declares. When issued, the public notice will be given widespread publicity in newspapers and on radio stations. Moritz points out that prospective settlers and bureau have been inconvenienced through misunderstanding concerning time for filing applications.

The initial opening on Yuma mesa division of the Gila project will include 54 farm units ranging from 40 to 160 acres, comprising 4941 acre total. Yuma project will open 27 units, from 28 to 82 acres, total 1405 acres.

Veterans who have written to reclamation bureau for information have been placed on a special mailing list and will be notified personally. Eligible veterans will have 90 days from date of opening announcement in which to submit applications for preference consideration. On the Gila project, veterans of World Wars I and II, Spanish-American and Philippine insurrection will have filing preference. Only World War II veterans will have such preference on the Yuma project.

Prospective settlers desiring further information should write to Superintendent, Gila Project, Bureau of Reclamation, Yuma, Arizona.

DESERT MARKERS . . Prize Contest

Down through the ages men have been leaving inscriptions and monuments in rock and metal. Prehistoric Indians incised their glyphs in the walls and built trail shrines as prayers to their gods. Later generations have erected monuments to mark historic spots or to honor the heroes of the past. Any of these subjects—petroglyphs, markers or monuments—are acceptable subjects for Desert Magazine's July photographic contest.

First prize is \$10, and second prize \$5. For non-prize winning pictures accepted for publication \$2 each will be paid. Entries must reach the Desert Magazine office in El Centro, California, not later than July 20, and the winning prints will be published in September.

HERE ARE THE RULES

1—Prints must be on black and white, 5x7 or larger, printed on glossy paper.

2—All entries must be in the Desert Magazine office by the 20th of the contest month.

3—Prints will be returned only when return postage is enclosed.

4—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights of prize winning pictures only.

5—Time and place of photograph are immaterial except that they must be from the desert Southwest.

6—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

7—Each photograph submitted should be fully labeled as to subject, time, place. Also as to technical data: shutter speed, hour of day, etc.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE

THE *Desert* MAGAZINE
EL CENTRO, CALIFORNIA

LETTERS...

The Useful Prickly Pear . . .

Portland, Oregon

Dear Desert:

We used to put prickly pear cactus in our drinking water when cloudbursts muddied it up. It would be very hard to convince my father and my grandfather that it was their imaginations, and not the cactus, which cleared up the water.

We also used the fruit of the prickly pear for preserves and jellies. And when the chickens showed signs of cold or roup we would give them a generous helping of prickly pear water.

JIMMIE JAMES

"No Trespass" Sign is Up . . .

Lick Observatory
Mt. Hamilton, California

Gentlemen:

I wonder how many Desert Magazine readers have traveled up Surprise canyon for a look at Panamint City on the strength of your report in last September's issue. Instead of finding even a rough road (passable with our jeep) we found a chain and sign across the road four miles up the canyon reading "Private Property. No Trespassing" and another more forcible sign alongside them. Since the road up to Panamint City shows on all maps, we had assumed it was public domain and worth a try. Now, according to the signs even hikers apparently are forbidden by the American Silver corporation. I hope you will report the present situation to other readers and save them a long, futile trip.

KATHERINE G. KRON

Quest for the Silver Vein . . .

Long Beach, California

Dear Desert:

You certainly started something when you published my lost silver vein story in your June issue. Twelve callers have come to my home for more data and directions as to how to reach the place where I found the silver ledge. Two of them were women prospectors and they insisted that I go with them, but I had to decline. Also, I have had 10 letters asking for more information.

Some of them have doodlebugs that will find any kind of mineral. Others have a system of blocking off the section so they cannot miss it, etc. I hope some one can find it for it is worth looking for, and might develop into a rich body of ore.

I thought you would like to know of the interest taken in this lost ledge, and also that it did me a lot of good to know that the spirit of mining is not dead. The cleanest money in the world comes out of the ground.

L. HARPENDING

Lost Geode Bed . . .

Del Mar, California

Dear Mr. Henderson:

"Operation Rockhound" and Mr. Hauser's account of the discovery of the Hauser Geode Beds in your May number suggest to me that I claim to be the discoverer of a deposit of geodes. My claim of original discovery may be less authentic than Mr. Hauser's but I make it with a certain boldness, in the knowledge that no one is likely to arise to dispute my claim.

It was in the spring of 1894 that I made one of a party of four on a prospecting venture into the La Plata mountains of southwestern Colorado. We had come by wagon from a point in New Mexico bound for the head of La Plata canyon and had met with assorted bad luck. A part of the trip had been made without benefit of road. We had been lost, had made some dry camps, and had a sick horse, so when the foothills and good water were reached we decided to camp for a day and rest our animals before tackling the canyon where we expected heavy going.

Dan Freeman, the leader of our party, was a white bearded patriarch who used his initials as his brand so of course his ranch was known as the Damfool Ranch and his stock as damfools. Once when I commented on a superb piece of driving in the rough he grinned and admitted to a half century of handling teams. Pressed for details he said that his first real job had been as driver of a stage between Peoria and Springfield, Illinois, before the coming of the railway.

Just above our camp a hillside showed numerous stones which resembled large brown buns and were obviously not rock of the country. One broke easily and proved to be a calcite geode but with a most interesting inclusion for the fine crystals which lined the cavity were stained brown with what was obviously bitumen or other asphalt-like substance. There was even a lump of this material in among the crystals. I broke several and all were similarly stained. I was not interested in geodes and collected none nor have I ever inquired if calcite geodes with an asphalt inclusion were a rarity or not. Perhaps some reader of Desert will tell me. The crystals were ruined by the stain but well opened specimens might be interesting as mineral rarities.

Southwestern Colorado has deposits of oil shales which fact points to a possible source of the asphaltic inclusions which may have migrated into the cavities under pressure and high temperature while the geodes were buried deep in the earth.

At this time it is difficult to locate that camp with much accuracy. Memory places

it between the mouth of La Plata canyon and Lightner creek, the next canyon east. Perhaps it was nearer to La Plata canyon than I remember as there was a good stream nearby. In those days this part of the country was rough and wild, without settlers. How it is today I do not know, nor if the geodes are still there, nor if perchance others have rediscovered them.

L. B. DIXON

Apologies to Hard Rock Shorty . . .

Los Angeles, California

Dear Friend Desert:

I am deeply grieved. I missed Hard Rock Shorty last month. Please hire him back again. He is a wonderful prevaricator. I had no intention of infringing on Shorty's domain when I sent you that yarn about the Arizona crater. Compared with Hard Rock I am a rank amateur liar. Tell Shorty I will never again intrude.

OLD DAD TOWER

Hell for the Indians . . .

Phoenix, Arizona

Dear Mr. Henderson:

I want to tell you how grateful I am for the publication in your June issue of "We Owe the Navajo Six Hundred Schools," by Dama Langley. The article was timed just right to contribute to a cause which is in a very bad way, and very much in need of such publicity.

Our Business and Professional Women's club has been addressing letters to the Appropriations committee in an effort to make congressmen understand how critical the situation has become. The sudden dismissing of the teachers and the sending of the children back to the reservations has created a situation that is tragic.

Our Indian schools in this state take care of orphans and half orphans and neglected children. When the schools are closed they must go back to the reservations where they have no homes, or seek aid through local welfare organizations. But welfare funds have been cut to where none are available for these children.

The missions for years have been overcrowded. The Indian T.B. Sanitarium is filled to capacity—and this and other big schools are in danger of being closed and standing idle.

Isn't it enough that we ask these Indians to fight for us, take away their good lands, refuse them a vote? And now we calmly close down their schools. Many years ago Marah Ellis Ryan wrote, "We take away from the Indian a religion that promises him a bright and beautiful hereafter and give him a religion that promises him hell . . ."

And now we, a supposedly Christian people, proceed to demonstrate this hell to him. And how shocked the smug politician would be if there should be another up-rising.

JOSEPHINE HENDERSON RYAN

Mines and Mining . .

Goldfield, Nevada . . .

Company-verified discovery of gold ore assaying from \$2 to \$1200 in the Florence mine at Goldfield has set the stage for possible new mining boom. Ore, apparently a deposit never before worked, was discovered while driving a crosscut at the 358 foot level, 1800 feet west of main shaft. It occurs as network of small irregular stringers of gold-bearing tellurium in andesite, and treating of whole mineralized mass will be necessary to save values. Two weeks at least will be required before any determination of extent of find may be made and officials of Esmeralda Operations, subsidiary of Newmont Mining company, operating mine, warn against over-optimism.

. . .

Winnemucca, Nevada . . .

Getchell mine, until the war Nevada's largest dividend-paying gold mine, will resume gold production when expansion of its mill from 1000 to 1500 tons daily capacity is completed. Four hundred men will be employed in mine and mill when full time production is reached. Jack Davis, formerly superintendent of West End mill in Tonopah is Getchell mill superintendent. Ore, which in the past was mined by open pit methods, averages \$7 to \$9 a ton and contains arsenic in the form of realgar. It is reported that a mill process has been evolved which carries off realgar by flotation and permits easier recovery of gold.

. . .

Beowawe, Nevada . . .

Mill of Gold Acres Consolidated, 30 miles south and west of Beowawe, is handling average of 400 tons a day with ore running \$7 a ton gold. Ore, yellowish quartz-lime material, is mined by open pit method and loaded on trucks by power shovel. Supply of ore, which shows no trace of gold when mortared and panned, is reported large, and material and equipment for new 500-ton mill is on the property awaiting construction. Present owners are Monahan and Bishop, and 25 men are employed at mine and mill.

. . .

Washington, D. C. . . .

Creation of a national minerals resources division within department of interior would be authorized by bill introduced in senate by Pat McCarran and in house of representatives by Charles H. Russell, both of Nevada. House version unanimously has been approved by committee on public lands. Bill also would provide for continued premium payments, to a maximum of \$80,000,000 per year, to encourage production of lead, copper, zinc and other strategic minerals.

Miami, Arizona . . .

Amico Mining company has been formed to do exploratory drilling on 3300 acres of land controlled by the company near Miami. Property consists of mining claims formerly known as Van Dyke and Sho Me Copper companies, and undeveloped adjacent areas. Stock of new corporation is held entirely by Anaconda Copper company, Miami Copper company and Inspiration Consolidated Copper company.

. . .

Kingman, Arizona . . .

Emerald Isle copper properties, 15 miles north of Kingman, which have been idle for several months, have been leased by eastern interests. Rehabilitation of mine and 500-ton-per-day leaching plant is under way. Mine will be operated by Robert Payne, its former resident production superintendent. Leasing followed engineering survey made by Dr. Herbert R. Hanley of Missouri School of Mines, to determine maximum possible production. Output will be used by eastern fabricating firm.

. . .

Window Rock, Arizona . . .

Navajo tribal treasury will be enriched more than \$100,000, if interior department approves oil and gas leases on several tracts of reservation land. In addition, tribesmen will receive \$16,875.75 annual rental on property. Largest bids were entered by Stanolind Oil and Gas company which offered \$104,644.80 for two tracts of land near Chinle, totaling 6240 acres. Additional 5120 acres near the Gap were leased to Burrell Collins of Phoenix.

. . .

Lida, Nevada . . .

Six tons of silver-lead ore estimated to run \$150 a ton have been shipped to a Salt Lake smelter from Reed talc mine, 30 miles west of Lida. Rich silver shoot was struck several months ago in mine which has shipped 15,000 tons of high grade talc. Mine lies along the strike of a granite-limestone contact. Talc is found along granite side of contact and silver at depth of 200 feet on limestone side. Property is operated by J. O. Greenan, with Frank M. Maloney in charge.

. . .

Bakersfield, California . . .

Josie S. Bishop, 70, reported to Kern county board of supervisors that radioactive ore, "the richest in North America," had been discovered on her property in Red Rock canyon near Mojave. She carried a letter from W. B. Tucker, state mineralogist, which stated that checking had shown her property to have radioactive materials, including radium and uranium. Josie, known as the "Radium Queen," told board she was seeking protection for herself and her claims.

Salt Lake City, Utah . . .

Metal prices have reached their peak and should move downward, according to Harry Y. Walker, president of American Smelting and Refining company, but increased labor and material costs will hold metal prices above average pre-war prices. Walker was in Salt Lake to attend five-day conference of managers of smelting firm.

. . .

Panamint City, California . . .

Predicting that Panamint City would regain its boom time population, American Silver corporation reports discovery of extensive silver vein in the old camp. Mining Engineer A. S. Geldman estimated vein, identified as the Tomboy, to contain not less than 100,000 tons of \$12.70 ore. Panamint City, with an estimated \$30,000,000 production, became a ghost town in 1875 after price of silver fell and a cloud-burst wrecked the camp.

. . .

Beatty, Nevada . . .

Recent development work at Beatty fluorspar mine will permit accelerated production, expected to reach five carloads a month. Mine, which operated at full capacity during World Wars I and II, is owned by J. Irving Crowell, jr., and has been worked by Crowell family for more than 20 years. It produces high grade metallurgical fluorite used for industrial and chemical purposes. Eight men are employed at present.

. . .

Washington, D. C. . . .

Mining claim holders were reminded that fiscal year ending July 1, 1947, is last year in which they may file "intention to hold" forms which make unnecessary performance of annual assessment work of \$100 value on each unpatented claim held. Exemption from assessment work was allowed during war period because of shortage of manpower and machinery, but yearly work must be resumed after July first this year. Filings of intention to hold must be made to county recorder in county in which claim is held, before noon, July 1, 1947, or such claims will be subject to entry.

. . .

New edition of *Nevada Mines*, booklet issued by Los Angeles Chamber of Commerce listing Nevada mining properties, is being prepared by E. D. Arthur, chamber mining engineer. *Minerals of the Southwest*, describing non-metallics of the area and listing their uses and possible markets, may be obtained free from the chamber.

. . .

Dr. Olaf P. Jenkins has replaced Walter W. Bradley as chief of the California division of mines. Jenkins had been with division as chief geologist since 1929. He is the author of numerous bulletins, pamphlets and maps, including 1938 state geologic map of California. He is former professor of geology and consulting engineer for mining and oil companies.

HERE AND THERE...on the Desert

ARIZONA

Army Returns to Desert . . .

YUMA—First big desert maneuvers since the war will be carried out near Imperial and Laguna dams this summer, when army ground forces undertake "Operation Furnace." Specially selected troops will test new fighting machines and improvements devised on basis of Patton's experience in North African war. Tanks, tractors and other heavy equipment will be given rigorous tryouts under desert heat conditions. Operation will extend through summer with first troops scheduled to arrive from Fort Knox late in May.

How Many Elk in Sitgreaves? . . .

HOLBROOK—Survey of elk population in Sitgreaves national forest resulted in a count of 401 elk by 12 men in four-day period. More yearling elk were seen than total number of mature animals killed in past fall's hunting season. Count was taken by men who stayed overnight in bedrolls at watering places, with animals checked at dusk and daybreak. Survey was made by state game department and forest service at 48 locations. Similar surveys were planned for Tonto, Coconino and Apache national forests.

Handicapped Self Help . . .

TOMBSTONE — Handi-capped Handi-craft, Inc., has been organized in Tombstone. Purpose of non-profit concern managed solely by employees, is to give health seekers opportunity to rehabilitate themselves in some form of employment a handicap will allow them to pursue. Production of leather goods, wallets, belts, cigarette cases and cactus lamps is planned, and stones will be cut and polished. Funds for equipment and instruction are being raised through donation.

Man Came Early to Ventana . . .

TUCSON—History of man in southern Arizona from 8000 B. C. will be told in permanent display of excavated Ventana cave materials at Arizona state museum. Three units of seven unit display have been

completed. Ventana cave, 100 miles west of Tucson in Papago reservation, contained springs used by man for 10,000 years, with bones of extinct animals underlying earliest human evidence. Cave, whose extreme dryness makes it one of few places in world where textiles and wood artifacts were preserved, was excavated by museum in 1941-42. Layers of refuse disclosed evidence of Folsom, Pino, Chiricahua-Pinto-Gypsum, San Pedro, Desert Hohokam and present Papago periods.

Bone Diggers Strike it Rich . . .

SPRINGERVILLE — Pleistocene ice age lake deposits of unknown extent in valley of Little Colorado river, 10 miles north of Springerville, have been investigated by a group under auspices of University of Arizona. Jumbled tusks and teeth of mammoths, the jaw bone of an ice age horse, part of a deer jaw and unidentified scattered bones were found in deposits which were laid down an estimated 30,000 years ago. Investigation of site will be continued if funds permit, according to Dr. Charles A. Reed, zoology instructor who made trip with Donald L. Bryant and William H. Carr.

Fort Tyson Rises Again . . .

QUARTZSITE—Arizona highway department has started a second reconstruction of old Fort Tyson at Quartzsite, built in 1856 and named for Charles Tyson, a settler. Fort never was regular army post, but was used by settlers as protection against Mojaves. Property was given to state by Mrs. Charles V. Kuehn, to be a memorial to her husband. Highway department restored fort and planted trees and shrubs, but watchman was dispensed with when funds ran low, and vandals set fire to structure and floods undermined its walls. Original plans called for picnic tables for tourists on grounds and water supplied from well across the highway.

Too Many Desert Farmers . . .

PHOENIX — Unless central Arizona obtains more water, 200,000 acres of now-productive farms may return to the desert, according to Charles A. Carson, jr. Carson, Arizona special counsel on Colorado river affairs, explained that because agriculture there was so attractive, there has been an expansion of agricultural lands in central Arizona beyond present water supply. He declared that for every acre-foot of water used for irrigation in the area, a gross crop value of \$50 was produced.

The Baron of Arizona, story of James Addison Reavis' scheme, after the Civil War, to grab 12,500,000 acres of Arizona's richest land, will be filmed in southern Arizona and Mexico.

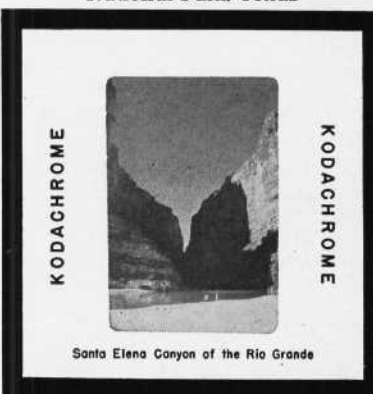
Frontier Lawman Passes On . . .

TUCSON—Jeff Milton, old-time peace officer, died in Tucson on May 7, age 85. He had been Texas ranger, border patrolman, U. S. deputy marshal, deputy sheriff, Wells Fargo "shotgun" messenger, El Paso police chief, cowpuncher and trail herder. He summed up his creed: "I never killed a man who didn't need killing and I never shot an animal except for food." When he and two others cornered the "Broncho Bill" Walters gang in Eagle Creek country, near Clifton, the engagement was outlined by Milton in a telegram to Wells Fargo: "Send two coffins and a doctor." Most famous exploit was killing of outlaw "Three-Finger Jack" in attempted train holdup at Fairbanks in 1900, during which Milton lost use of his left arm, riddled by bullets.

Arizona jackrabbits have eaten 30 tons of grass stems per section in one area of range grass, according to Walter Kiehl of Douglas soil conservation service. Kiehl, recommending shotgun campaign, said food would have supported two cows in each section.

More than \$22,000,000 has been allocated by Mexican government to complete Nogales - Guaymas and Culiacan - Tepic sections of Nogales-Mexico City highway.

BIG BEND . . . National Park, Texas



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Enjoy this newest of our National Parks, located in the "Big Bend" of the Rio Grande along the Mexican Border
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JULY 3-4-5-6

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Entries close 3:00 p. m. July 2

Northern Arizona Fair Assn.—Producers
Headquarters—Ground Floor Court House
Write Box 346, Prescott, Arizona

Fred Schemmer, Chairman; Jim Gentry, Sec'y
Mike Stuart, Arena Director

THE DESERT TRADING POST

Classified advertising in this section costs 7 cents a word, \$1.00 minimum per issue

INDIAN GOODS

ALASKA INDIAN, Canadian Indian and Eskimo fancy moccasins; dolls, baskets, totem poles, carved ivory, etc. Northwest Indian novelties, 2186 N. W. Glisan Street, Portland 10, Oregon.

INTERESTING, colorful Navajo rugs, Indian pottery, curios and baskets. Stop and see El Camino Gem Shop on Route 101, Solana Beach, Calif.

ALWAYS THE BEST in Indian things. Old and new Navajo rugs a specialty. Fine jewelry and baskets. Our thirty tons of rocks and minerals include many hard to get items. Always welcome. Daniels Indian Trading Post, 401 W. Foothill Blvd., Fontana, Calif.

4 **VERY FINE** ancient Indian Arrowheads \$1.00. 4 tiny perfect bird arrowheads \$1.00. 1 Ancient Stone Tomahawk \$1.00. 2 Flint Skinning Knives \$1.00. 1 Large Flint Hoe \$1.00. 2 Spearheads \$1.00. 10 Arrowheads from 10 states \$1.00. 20 Damaged Arrowheads \$1.00. 10 Fish Scales \$1.00. 10 Hide Scrapers \$1.00. 4 Perfect Saw edged arrowheads \$1.00. The above 11 offers \$10.00 Postpaid. List free. Lear's, Box 569, Galveston, Texas.

RARE INDIAN COLLECTION for sale: Sacred Fetishes in their jar Homes, Prize and ceremonial Navajo rugs, old and new Basketry, old and new Pottery, other things too numerous to mention, many impossible to replace. Collection has taken hundreds of trips over many years. H. A. McHenry, 1282 Summit Ave., Pasadena 3, California. Telephone Sycamore 4-3920.

BOOKS — MAGAZINES

COLLECTORS the world over read The Earth Science Digest. If you like earth science, you will like The Earth Science Digest. One year subscription, \$2.00 — Sample copy 25c. Write: Dept. D., Box 57, Omaha 3, Nebraska.

BOOKFINDERS! (Scarce, out-of-print, unusual books). Supplied promptly. Send wants. Clifton, Box 1377d, Beverly Hills, Calif.

BACK COPIES of all issues of Desert Magazine except Volume 1, No. 1, are available to complete your files. Some of the early issues are very limited and the only ones available are issues for which we paid \$1.00 and \$2.00 each—and we resell them at the same price. Send in a list of your missing copies, and Desert staff will advise you as to the cost of making your file complete. Desert Magazine, El Centro, California.

MAKE OFFER: Desert Magazines and Binders, 1938-39-40-41-42-43-44 complete except No. 1 issue. Also Japanese Officer's sword, U. S. Cavalry saber, U. S. Very pistol 1917. Wm. A. Goldschmidt, 629 No. Findlay Ave., Montebello, Calif.

FOR SALE: Volume 1 Desert Magazine, folder. Numerous others. Make offer. Carrie Sackriter, Auburn, Calif.

MISCELLANEOUS

FOR SALE: Carborundum brand Diamond Saw Blades. 8", \$8.00; 10", \$10.35; 12", \$14.80. Gallup Car Parts, Inc., Gallup, New Mexico.

KARAKULS. Producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 place, Maywood, California.

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EXCHANGE: Two acres with new 16x16 cabin on Highway 140, open year round Merced to Yosemite Park. Household goods and tools included. Want desert lot with water available. H. N. Curtis, Midpines, Mariposa County, California.

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COUNTY MAPS . . .

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WORLD'S MINERALS

2417 San Pablo Ave. Oakland 12, Calif.

Bernard A. Gillespie and Mike Meason, Gila Bend rancher and his foreman, bought 45-foot sport fishing boat at San Pedro and have started home on a 2000 mile route which will take them down Mexican coast and up gulf of California and Colorado river. Trip will be interrupted by month-long fishing stopover.

R. F. Upton, first permanent ranger at Sunset Crater national monument will be at the crater to offer guide service and information every weekend until tent living quarters are constructed. Then he and Mrs. Upton will move to monument for the summer.

Guy Wellington Knauff, who has prepared more than 50,000 desert dioramas framed in cactus wood, died in Tucson on April 20.

CALIFORNIA

They Want Desert Farms . . .

EL CENTRO—Veterans Service Officer R. Pete Ostrander reports that more than 1000 veterans in all parts of the country have asked for information regarding opening of East Mesa lands for farming. Imperial Irrigation district has been authorized 560 acres of mesa for test purposes, and there will be no information regarding opening of area until experiments have been completed. East Mesa comprises 190,000 acres of withdrawn land east of El Centro, but it is not known how much will be suitable for homestead entry.

Marines Want Chocolate Area . . .

NILAND—Condemnation of property of 330 landholders for establishment of new Marine corps artillery and anti-aircraft firing range in Riverside and Imperial counties, has been asked in U. S. district court in Riverside. Total of 112,613 acres will be added to enormous areas already held by armed forces in desert area. Range will be roughly triangular in shape, taking in mountainous area south and east of Salt Creek wash. Southwest border will be Coachella extension of All-American canal, running down to general area of Niland.

Desert Still Dangerous . . .

NILAND — August Garrity, 63-year-old Los Angeles man, his son and daughter-in-law, tried to cross the desert on old Blythe road without water or sufficient gas. Taking wrong road branch, they ran out of gas 12 miles inside Riverside county and started to walk back to Niland, with water supply drained from truck radiator. After walking for 24 hours, son collapsed and five miles later his wife fell in the road. Garrity continued total of 43 miles before dropping, nine miles east of Beal Well. Motorist picked up son and daughter-in-law, but missed Garrity. Deputies in a jeep found him face down by the road, Saturday night. His first words were "I'd give \$100 for a drink of water."

Raiding Lion Trapped . . .

BENTON — Six-foot mountain lion which had been killing goats was trapped south of Black lake in the Benton region by Herbert Hague, state trapper of Bishop. Age of lion, one of few ever caught in Inyo-Mono area, was estimated at 10 years. Hague reported that animal's teeth showed signs of breaking down, probably explaining why he raided domestic yards rather than hunting deer which usually suffer considerable losses. Bounty on male lions is \$45.

Thermal chamber of commerce has appointed a committee to attempt to obtain a public beach on the Salton sea for swimming and picnicking, before all desirable beach areas are privately developed.

Last of 20,000 acres of guayule planted at Banning during war is being plowed under, and the land planted to wheat. Desert Rubber company project was abandoned because production cost was 65 cents per pound, compared with South American rubber, 17 cents a pound, import price.

Big Base Called Permanent . . .

INYOKERN—Naval Ordnance Test Station in Mojave desert is one of most permanent of government military installations, Captain James B. Sykes, commanding officer, told Indian Wells Valley business men, after recent visit of Vice Admiral George Hussey, chief of bureau of ordnance, to the 300,000 acre base. Sykes explained that he has orders to prepare for 1500 new families at the base in the near future and declared that contracts awarded at NOTS amount to more than \$10,000,000 at present time, with more appropriations coming.

Oscar Carl Borg, 69, noted painter of Indian life died May 13 at Santa Barbara. A self-taught artist, he lived to see his work hung in leading galleries of France, Sweden and the United States.

Members of Hinkley-Harper lake farm center on Mojave desert seek cessation of the state-county coyote eradication campaign in the alfalfa belt. Fewer coyotes, more rabbits, they complain.

\$2,714,571

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Since the Spring of 1936, power sales revenue has increased from \$52,296 to \$2,714,571. Net income has grown from \$9,848 to \$991,383 recorded for the year 1946.

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This demand was provided for by the people of the District who overwhelmingly voted to authorize the expenditure of \$6,200,000 for ADDITIONS AND BETTERMENTS to their publicly-owned power system, including a 20,000 kilowatt steam-electric plant, new substations, new transmission lines, and other vital facilities.

The District's Program, known as the 1945 POWER DEVELOPMENT PLAN, is well under way. Contracts are being let by the District's Board of Directors almost weekly, and, actual construction of many major projects is already in progress.

Y-E-S, IMPERIAL IRRIGATION DISTRICT merits confidence. It has been demonstrated over an eleven-year period that the District can assume increased volume and continue to operate successfully.

Imperial Irrigation District



Use Your Own Power—Make it Pay for the All American Canal

William E. Warne of California has been nominated by President Truman to be assistant secretary of interior, replacing Warner W. Gardner who resigns June 30.

Frank R. Givens, custodian Joshua Tree national monument told Riverside board of county supervisors that government would like to obtain title to 15,360 acres in Pinto basin to improve roads, build museum and ranger station and install campsites at Cottonwood springs and other locations.

Byron Cummings, author of *Kinishba*, who recently retired as custodian of Kinishba Pueblo near Fort Apache, Arizona, has become honorary member of board of trustees of San Diego Museum of Man, and a research associate in Southwestern archeology there. Dr. Cummings, teacher, explorer and archeologist in the Southwest since 1900, will make his home in Bonita, California.

NEVADA

Davis Rock Fault Costly . . .

DAVIS DAM—Cost of Davis dam project will be increased an estimated \$6,500,000 as result of an extensive rock fault found on Arizona side of Colorado river at the site. Core drilling disclosed broken rock conditions after excavation for power plant and diversion channel had proceeded to considerable depth. Money will be spent shifting intake dam to more parallel position with river to remove its north end from a weak spot, moving power house site 40 feet, thickening spillway base, additional excavating and the strengthening of rock formations by blowing concrete mixture under pressure into them. Davis dam proper is not involved in any way, according to reclamation bureau statement.

They Flew In and Walked Out . . .

BEATTY—Converted B-18 bomber was forced down in desert 20 miles northwest of Beatty when one of the two motors

failed. Pilot Victor Spezia landed craft on emergency strip built by Tonopah army air base during war and he and three others aboard spent night in plane and started walking out next day. Caught in desert thunderstorm and spending next night huddled together to keep warm on open desert, they reached Lathrop Wells following evening and were driven to Beatty. Plane's cargo, 150,000 tomato plants from Moapa valley, was total loss.

Volunteers Halt Pioche Blaze . . .

PIOCHE—Miners of Pioche, Panaca farmers and Caliente railroad men halted raging flames which, May 8, destroyed a Pioche business block with estimated \$200,000-\$300,000 damage. Incinerator embers, blown by 40-mile south wind, fired new hospital wing and resulting gale-spread flames gutted hospital, warehouses, bars and residences. Caliente volunteer fire department truck roared into Pioche with all tires flat, after covering 24 miles in 30 minutes. Volunteers from Panaca, 12 miles distant, hooked cars to front and rear of their 1929 fire truck, to enable it to make the winding Pioche grade. One person suffered minor injuries in fire.

He Pioneered at Rawhide . . .

RENO—Emil M. Grutt, one of four brothers who pioneered the mining boom camp of Rawhide, Nevada, died in Reno April 24, age 73. His brothers Eugene, Fred and Leo survive. Grutt brothers came to Nevada in 1900, engaging in general merchandising. They transferred activities to Rawhide district in 1906, buying total of 21 claims for which they paid \$110,000, and at one time heading and controlling 11 different mining corporations. During Rawhide boom they were multi-millionaires on paper. Believing in town's future, they held their properties through and after boom collapse and own many claims in area today. Throughout the years Emil, who moved to Reno, returned to Rawhide for months or a year placer mining or working properties there.

Gabbs for Sale or Lease . . .

GABBS—War Assets administration has called for bids on ore deposits, processing plant and town of Gabbs, Nye county, on sale or lease basis. Part of Basic Magnesium project, Gabbs townsite includes 25-room hotel and homes for 250 persons, with housing facilities now 65 per cent occupied. Mining property consists of 4990 acres with 45 lode mining claims, 10 mill-sites and 39 placer claims. Residents of town have been assured that Gabbs will not be sold piecemeal, but are hoping entire setup will pass into hands of some big mining concern which will continue operation of the brucite deposits.

According to figures released by state tax commission, taxes were paid on 210 burros in Nevada last year.

Visiting hours at Hoover dam have been lengthened for summer season, and until October 1, structure will be open to tourists from 7:30 a. m. to 9:30 p. m.

Application blanks for permits to use privately owned boats on Lake Mead are available from the superintendent at Boulder City, Nevada.

NEW MEXICO

Would Tunnel Great Divide . . .

SANTA FE—Reclamation bureau officials predict trans-mountain San Juan-Chama water diversion project in northern New Mexico will not be acted upon until 1950. Project would provide for tunnel through continental divide to carry some of runoff from Colorado river watershed into Rio Grande river. Upper Colorado river basin states must decide how to apportion runoff, and state legislatures ratify agreements before amount that may be used in New Mexico can be determined.

What Ended Pueblo Culture? . . .

SANTA FE—Formation of commission of scientists who would try to determine definitely why great native population vanished from the Southwest, was proposed by H. P. Mera, president of southwestern division of American Association for Advancement of Science. He declared Southwest from eleventh to thirteenth centuries was so thickly populated that "it is unbelievable." Many scientists believe that 23-year drouth at end of thirteenth century drove people away. Mera suggests departure because of sudden plague.

Technicians Enter Mexico . . .

LAS CRUCES—American expeditionary force of veterinarians and technicians has entered Mexico to help authorities fight epidemic foot-and-mouth disease among livestock there. United States also has furnished 10 bulldozers, 100 jeeps, 250 trucks and 10 steamshovels, and Mexican government has mobilized 15,000 soldiers to assist. Dr. Maurice S. Shahan, agriculture department official in charge, estimates two years work will eradicate disease in Mexico, and congress has appropriated \$9,000,000 to match equal Mexican appropriation for the battle.

Ancient Navajo Reported . . .

RUIDOSO—Francisco Saiz, Navajo, of Arabella, 40 miles northeast of Ruidoso, is reputed to be 137 years old, possibly the nation's oldest living human being. Francisco's story was uncovered by Mary Nell Taeger, Ruidoso reporter, who interviewed the Indian through Spanish-speaking interpreter and declared herself satisfied as to his age. Francisco has worked for the Sanchez family since the 1860's. Before that he had been cowboy and shepherd, miner, and first government freighter at Fort Stanton. He is still active enough to get about with a cane, and eats three hearty meals a day with his third set of natural teeth.

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El Centro, California

Farms for Navajo People? . . .

SHIPROCK—Proposed Shiprock irrigation project would allow 12,000 Navajo to become self-sufficient farmers and relieve economic pressure on rest of tribe dependent on existing resources, Howard Johnson, Indian service agricultural agent declares. He pointed out that concentration of population near Shiprock also would bring 7000 children now without schools relatively close together so that day schools could be provided within walking distance. Project would provide 400,000 acre-foot storage reservoir on San Juan at Pump canyon, supplemental 100,000 acre-foot reservoir between Gallup and Shiprock, 80 miles of main canal, 200 miles of principal laterals, a distribution system for 117,000 acres and a hydro-electric generating plant.

Rio Grande Boatmen Drown . . .

PILAR—Henry W. Kelly and John Murphy drowned when rubber liferaft in which they were attempting to run turbulent Rio Grande river capsized. Accident occurred 50 miles north of Santa Fe on waters swollen by rain and spring runoff. Trip was a test run preparatory to shooting 14-mile stretch of rapids from Arroyo Hondo through Rio Grande gorge to Taos Junction. Kelly's body was recovered two days later, 18 miles down river. That of Murphy, former Eighth air force bombing pilot with 23 combat missions, had not been found after five days.

Deming has taken over million dollar army airbase there as a municipal air field.

Elma R. Smith, Navajo girl from Tohatchi, was first of her tribe to receive master's degree from University of Arizona May 28. She received early schooling at Ganado Presbyterian mission and also was first Navajo to earn bachelor's degree at Arizona, awarded in 1941. Her parents, speaking tribal language, live on reservation and Miss Smith plans to return there and teach among her people.

Jemez mountains will be stocked with elk through agreement between state game commission and U. S. forest service. Elk will be obtained in Wyoming, and 30-40 head placed in area next winter.

UTAH

They Asked Wrong Arbitrator . . .

GREENRIVER—Fifty years ago the Green river at town of Greenriver changed its channel, leaving an island of 300 acres. The old channel filled, creating a tract of land which was fenced, farmed and improved by farmers on adjoining ranches. Recently Greenriver ranchers Clay Asimus, Harold Halverson and Boyd Hunt applied to state land board to settle question of who owned land. After completion of survey, board decided that land belonged to state, but offered "tenants" opportunity to buy it back.

Poppies Are Weeds in Utah . . .

LOGAN—Flanders poppies, classed as a noxious weed in Utah, are facing full-scale land-air attack by state agricultural department, county officers and private land owners in Cache and Box Elder counties. Poppies have expanded from area of a few rods to point where they are stifling crops over 2100 acres of farm land. Wheat-fields and roadsides will be sprayed with solution which kills flat-leaved poppies but does not harm wheat.

Mormons Irrigated First . . .

SALT LAKE CITY—Utah pioneers launched first irrigation in the West, according to Reclamation Commissioner Michael W. Straus. Speaking to house subcommittee in Washington, he declared this to be centennial of irrigation as we know it today. Brigham Young told the Mormons, as their first task in Salt Lake valley, to plant seed in the arid ground and divert a stream to water it. By 1902 settlers in western states had put \$250,000,000 into 20,000 districts which irrigated 9,500,000 acres. In that year federal bureau of reclamation was created. Federal projects now irrigate 4,000,000 acres with investment just under one billion dollars.

Flag Marks Special Events . . .

SALT LAKE CITY—Great United States flag, which was to have flown continuously on Ensign peak during centennial months, will be raised only for special dates, at request of President Truman. President was asked whether, considering inaccessibility of peak and special occasion of the centennial, flag could not fly continuously instead of being lowered each evening as prescribed by congressional resolution. Presidential reply urged that flag be lowered each evening. Ensign peak, behind state capitol, is site where first flag was flown in Salt Lake valley, after arrival of Mormons 100 years ago.

River Memorial Planned . . .

RICHFIELD—Erection of a memorial to O. G. Howland, William H. Dunn and Seneca Howland, who left Powell Colorado river expedition in 1869 and were killed by Indians in the Arizona "strip" region, is planned by Harry Aleson and a group of present-day Colorado river boatmen. Memorial will be in form of a pyramid, construction costs for which have al-

ready been met. Aleson announced that cards have been sent to 1500 families, seeking all possible information regarding Howland brothers and Dunn.

Douglas M. Kinney, U. S. geological survey, has arrived in Vernal to begin mapping and measuring stratigraphic sections in Uintah mountains for fuel section of the survey.

Uintah and Ouray Indians were among tribes petitioning congress for repeal of law making it a penal offense to sell intoxicating liquor to an Indian. Bill making such sale legal has been approved by house committee.

Utah Mining and Contracting Review protests that Mormon church officials ignored state's most important single industry—copper—and recovered tabernacle roof with aluminum.

Water supplies held as of May 1 in 14 principal Utah reservoirs, for irrigation and power, total 2,590,000 acre-feet. Amount is greatly above normal with some of larger reservoirs containing two and three year supplies.

Grandsons and granddaughters of Brigham Young plan erection of granite monument at his birthplace, Whitman Center, Vermont.

Bushnell hospital, near Brigham City, built in 1943 at cost of \$10,000,000, has been offered for sale or lease by War Assets administration. Property consists of 298 acres with 80 brick, masonry and concrete buildings and 108 frame structures.

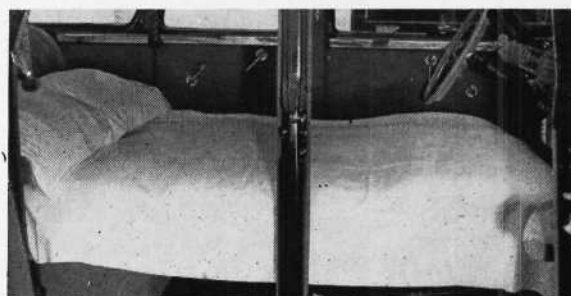
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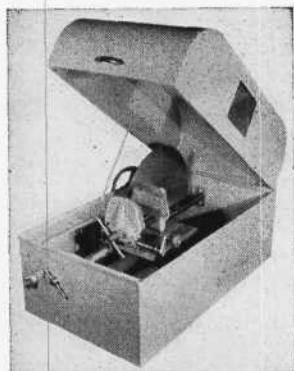
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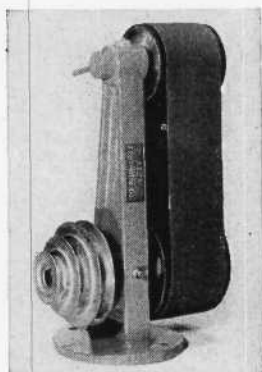
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AMATEUR GEM CUTTER

By LELANDE QUICK

Editor of The Lapidary Journal

Long ago I abandoned any idea of combining my vocation as executive of one of America's large pharmaceutical manufacturing companies with my avocation of gem cutting. The combination of the two things seemed hopeless but we live in a wonderful world where old truths are vanishing every day. I have always believed that none of the old cliches were truer than the one that "you can't get blood out of a stone" but I picked up my favorite newspaper to read the headline "Blood Drawn from Stones Army Discloses." So there is a connecting link between my avocation and vocation.

It seems that while millions of us were visiting the blood collecting centers during the late conflict to donate our blood for plasma-making purposes, the Germans were calmly producing acetamine from limestone and coke. From acetamine they produced a synthetic substitute for blood plasma for the treatment of shock and wounds and for transfusions. They used it 300,000 times in 40,000 patients and the new "blood" has been named periston.

This situation presents a serious temptation to the would-be humorist. Please don't write in and tell me about bloodstone being a favorite gem for years, and no quips about gall stones, please.

I am encouraged by this latest miracle of science to believe that I yet may find the answer to the two problems I have been working on for many years—an arrangement to make the toast and the jelly always come out even and the invention of a coffee pot that will not boil over. I have said before that I am the world's worst mechanic; that I have only recently solved the intricacies of putting the cap back on the toothpaste tube. To me the lathe is a greater mystery than atomic energy and some people boldly suggest that therefore I should never attempt to write about lapidary machinery, etc. That would be like never having a dramatic critic without the acting ability of John Barrymore or a book reviewer without the genius of Shakespeare.

I facetiously entertained the Los Angeles Lapidary society once at a Christmas party. To prove my ability to them I demonstrated my ingenuity as a great inventor. Some of these great contributions to science have been forgotten but I do remember the most useful contribution of all. I invented a folding stick that could be carried about easily. When it was unfolded and extended it measured exactly 10 feet six inches. This was to be used for people you wouldn't care to touch with a 10 foot pole. On the end of the stick was a little box containing perhaps 100 pins. In case anyone said "for two pins I'd punch you in the nose," you could always reach in the little box and oblige them.

So far, however, I have been able to understand and interpret the good points and determine the weaknesses of most of the lapidary machinery but I am beginning to worry. Since I have attempted little faceting, and I want to get myself some faceting equipment, I find my lack of an engineering degree a great handicap. New faceting equipment is blossoming forth like dandelions on a spring lawn. I have de-

cided that the best thing for me to do, since I have so many friends who do facet, is to facet a stone on each of several types of their equipment and then make up my mind. Buying faceting equipment is like buying a car. Almost every man thinks his automobile is the best of all when he has never driven any other car. Thousands of automobiles have been sold when the salesmen have handed the prospective purchaser the keys and said, "Here, you take it for a drive." And thousands of faceting devices will be sold the same way when some smart dealer says, "Here, sit down and work at this thing an hour or two and see how it works." By that method some one will sell me a faceting head instead of asking me to buy it.

The big swing to faceting is occasioned by several things, principal of which is the availability now of synthetic materials. This makes it possible for the amateur to have his "rubies" and "sapphires." But the amateurs are finding that polishing spinel for instance is not the same as polishing agate. I have had trouble doing a "sapphire" cabochon in spite of the fact that I bought special materials for polishing it. Several people have inquired how to polish spinel and so I asked John Grieger who probably sells as much of it as anyone. John says, "After grinding the conventional way, sand on a fairly new 220 grit cloth and finish on a worn cloth of the same grit. Sanding should be done at slow speed (500 r.p.m.), using light pressure. An 'orange peel' surface will be the best obtainable up to this point. The next operation requires a hard felt wheel running at slow speed. Mix 2F grit with water to a crumbly consistency and apply it to the wheel with a spatula or putty knife. Use heavy pressure in this operation and continue it until all pits and scratches are removed. A final mirror finish is obtained on a hard felt buff at motor speed (1750 r.p.m. in most instances), using A-1 coarse or Linde A Ruby powder as the polishing agent. The same care must be exercised against getting the stone hot as in regular procedure so that fractures are avoided."

I have obtained a fine surface on the back of a stone by rubbing it in a paste of "4 minute grit" on a piece of plate glass, using only the pressure of my finger and not having the gem on a dop. I have never tried to do the top of a cabochon in this manner as one cannot control it with the fingers. This is also a good method of controlling the grinding of the back surface of fine and small pieces such as opal and is more satisfactory than the average lap wheel or the side of a grinder although it takes a little longer.

Many readers probably have produced good polished gems of spinel quite differently. If you have will you take the time to write us about it? Perhaps we can develop a forum on spinel of great value to all.

The baby of the lapidary societies, the San Pedro Lapidary society, will hold a first showing of its work in the lounge of Banning Homes at San Pedro, California, on Saturday and Sunday, July 12 and 13.

GEMS AND MINERALS

ARTHUR L. EATON, Editor

CAPACITY CROWDS PACK CALIFORNIA ROCK CONVENTION

Capacity crowds attended annual convention of California Federation of Mineralogical societies, held in Santa Barbara Natural History museum, May 23-25. Forty tables and nine glass cases held exhibits by societies, individuals and dealers. Additional dealers set up shop outdoors under the big oaks and lapidary equipment was displayed and operated in an adjoining building. Chuck wagon enabled visitors to obtain food on premises.

Judges for competitive exhibits were: Minerals and mineral displays, Hatfield Goudy, Bob Roland, O. C. Smith; polished material, Leland Quick, Belle Rugg; dealers' displays, Wm. Pitts, Carl Noren.

Awards were as follows: Society exhibits: 1, Southwest Mineralogists, Los Angeles; 2, Mineralogical Society of Southern California, Pasadena; 3, East Bay Mineral society, Oakland. Minerals: Oscar H. Venter, Sequoia. Crystals: 1, C. A. Noren, Sequoia; 2, Mrs. D. H. Clark, Orange Belt; 3, Dr. Warren F. Fox, Orange Belt. Minerals from one locality: 1, Donald George, Pala. Guest exhibit: 1, California Institute of Technology, Pasadena. Rare minerals and unusual localities: 1, C. A. Noren, Sequoia. Minerals—all types, size limited to two inches or less: 1, Jack Streeter, Mineralogical Society of Southern California. Dealer: 1, Willard L. Elsing, Pittsburg, Kansas, Tri-State minerals.

Polished slabs or flats: 1, Pete Eitzen, Sequoia; 2, Eddie Redenbach, Searles Lake; 3, Mr. and Mrs. Chris Andersen, Sequoia. Cabochons: 1, R. W. Carpenter, East Bay Mineral society; 2, Mrs. G. B. Nash, Orange Belt; 3, Arthur Maudens, San Jose. Faceted stones: 1, B. N. Porter, East Bay. Novelties: 1, O. C. Barnes, Southwest Mineralogists, work in onyx; 2, Frank Dodson, Sequoia, spheres and paperweights. Jewelrycraft: 1, Mrs. Quita Ruff, Mineralogical Society of Southern California; 2, Mrs. Chris Andersen, Sequoia; 3, Charles Cook, Southwest Mineralogists. Specials for attractive displays not otherwise classified: Kilian E. Bensusan, Ventura Gem and Mineral society, T. W. Dibblee.

All federation officers were reelected: Orlin J. Bell, president; Jack Streeter, vice-president; Mrs. Dorothy Craig, 4139 South Van Ness avenue, Los Angeles, secretary; Modesto Leonardi, treasurer. San Luis Obispo, Redwood Empire (Sonoma county), San Geronio (Banning), and Coachella Valley (Indio) societies joined the federation. Next convention was set for June, 1948, at Long Beach.

Barbecue and auction, at Veterans' memorial hall on the beach, climaxed convention social activities. A bronze plaque was presented to William B. Pitts for outstanding work in the lapidary field. Santa Barbara Mineralogical society was convention host.

Ernest Chapman was speaker at May 14 meeting of Long Beach Mineralogical society. His subject was opals of Australia. May field trip was to the Santa Barbara convention.

About 100 guests attended display of gems and jewelry put on by Northern California Mineral society, San Francisco. Beginners' lapidary group meets every Thursday evening, 422 Belvedere street. Visitors are welcome at all society activities. President is L. P. Bolander, 462 Fair Oaks street.

DENVER INVITES ROCKHOUNDS FOR SUMMER FIELD TRIPS

Colorado Mineral society, Denver, invites visiting rockhounds to join with them in collecting mineral specimens this summer in some of Colorado's famous mineral localities. Trips scheduled are: July 4-6—Gunnison, for tourmaline, beryl, other pegmatite minerals, garnet, fishing; August 10—Gold Hill for rare minerals; August 31-September 1—Nathrop, for garnet, topaz, obsidian, fishing. Earlier trips this year were to Sterling, for light-blue barite crystals, May 18; Salt Lake City for Rocky Mountain federation meet and field trip to Topaz mountain, June 12-15; Monument for Jasper and agatized material suitable for polishing, June 22. Information, Secretary Mary A. Piper, Room 220, State Museum building, 14th street at Sherman, Denver.

At annual variety meeting May 2, James Rose Harvey presented a technicolor sound film story of Colorado, issued by state museum, showing history of Colorado from time of the dinosaur. Mineral auction was held.

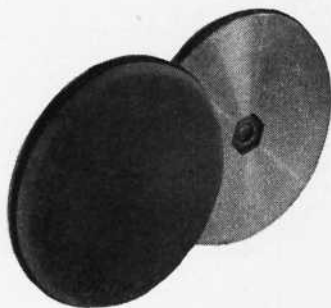
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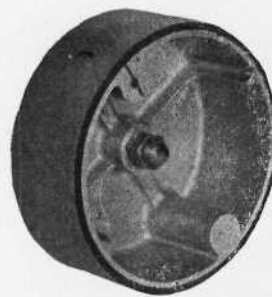
These are the same catalogs mentioned on the POSTCARD WE SENT TO YOU. If you did not receive one of these cards, write for them and we will also put your name on our mailing list. These will be more than catalogs, containing articles on how to polish rocks that give you trouble and original MODERN JEWELRY DESIGNS never before published.



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HAVE DISPOSED of Ancient Buried City, Wickliff, Kentucky, which you should see, great display minerals, artifacts, fossils. Am now buying meteorites, fluorescent minerals, in quantities, "cull" diamonds, zircons, any other stones, not gem grade, rough with fluorescent qualities. Offer Kentucky-Illinois fluorites, (rare specimens), unusual Arkansas quartz, old Michigan coppers. No lists. Come and see us. Fain White King, 2700 Washington Ave., Cairo, Ill.

PLUME AGATE—Gorgeous A-1 Red Plume in Clear Agate. Save 400%. Finish own stones. Very reasonable. Approval selection. L. E. Perry, 111 N. Chester St., Pasadena 4, Calif.

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MINERAL SPECIMENS, slabs or material by the pound for cutting and polishing, RX Units, Felker Di-Met Saw Blades, Carborundum wheels, Cerium Oxide, Preform Cabochons, Indian jewelry, neck chains. Be sure and stop, A. L. Jarvis, Route 2, Box 350, Watsonville, California, 3 miles S. on State highway No. 1.

MINERAL SPECIMENS: Micro-mount and Thumb-nail sizes; write today for free list. J. E. Byron, Mining Engineer, 1240 Pearl Street, Boulder, Colorado.

MINERALS, GEMS, COINS, Bills, Old Glass, Books, Stamps, Fossils, Buttons, Dolls, Weapons, Miniatures, Indian Silver Rings and Bracelets. Also Mexican. Catalogue 5c. Cowboy Lemley, Las Cruces, New Mexico.

MONTANA MOSS AGATES in the rough for gem cutting \$1.00 per lb. plus postage. Also Slabbed Agate 25c per sq. in. (Minimum order \$1.00). Elliott Gem Shop, 26 Jergins Arcade, Long Beach 2, California.

THE DESERT RATS NEST—All gems listed in the March issue still in stock and the following new arrivals, Australian faced opal, dark red and green colors, uncut rough red and green pinfire opal, from Coober Pedy field. New parcel of star sapphires, some fine stones, gray color only. Two great tourmaline matrix specimens, 2 and 3 pounds wt. My private collection, 800 pounds museum specimens. Rose green and bi-color Mesa Grande tourmalines, up to 1½ in diameter. Finest in the west. In customs fine amethyst and citrine crystal points. Lots of specimens. Geo. W. Chambers, P. O. Box 1123, Encinitas, Calif. Home address: Contact Texaco filling station, on 101 and F Sts.

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YOUR OPPORTUNITY: We have to move and are going to reduce our large stock of Nevada material. Assorted, agatized and opalized wood, agates, algae, jaspers, geodes, amygdaloids, etc., 5 lbs. \$2.00, 10 lbs. \$3.50, 25 lbs. \$7.00. Slabs from this material 10 sq. in. \$1.00. 50 sq. in. \$4.00, 100 sq. in. \$7.00. Assorted good specimen wood and lots of good cutting material, 10 lbs. \$2.50, 20 lbs. \$4.50, 40 lbs. \$8.00. Please include postage or we will ship express, charges collect, whichever you prefer. John L. James, Tonopah, Nevada.

JADE, RHODONITE, Lapis Lazuli. Try us for a fine gloss polish on these hard to finish gem stones. Large specimen polishing. Drilling any size and quantity. H. M. Samuelson, 1012 El Camino Real, N., Salinas, Calif.

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SILVER STATE GEM MATERIALS! Attention! Collectors everywhere. If you want something entirely different for your collection, send for my priced approval selection of Shadow and Ribbon agate. Also others. You risk nothing as you pay for only what you keep. J. O. Spangler, Box 96, Battle Mountain, Nevada.

ATTENTION ROCKCUTTERS—We are introducing the new "Rockmaster" Professional Slabbing Saw. 20" blade capacity, 4" cross-feed, ball-bearing arbor. Fool-proof and wear-proof design. Shop-tested 1 year. Cuts rock sizes from pebbles to large book-ends. Very reasonably priced. Stop at our shop in Needles for demonstration or write for detailed information. McShan Ranch Gem Shop, "Mac & Maggie," Box 22, Needles, Calif.

DOLLAR BARGAINS: (1) 10 small quartz crystals; (2) 2 Needles palm specimens, fiber, eyes polished; (3) 3 lb. fluorescent assortment; (4) slab Needles palm; (5) 6 desert rose formations; (6) Specimen Pyrophyllite; (7) Specimen Garnet; (8) 20 individual palm roots petrified; (9) 2 Needles palm cabochons, fiber, eyes; (10) Moss agate slice; (11) Mule Canyon Palm slice; (12) 2 lbs. Lavic Jasper. \$1.00 each, or 12 items \$10. Postage extra. McShan Ranch Gem Shop, Box 22, Needles, Calif.

MINERAL AND FOSSIL COLLECTORS! Read The Earth Science Digest, a monthly publication reaching thousands of collectors the world over. One year subscription \$2.00. Sample copy 25c. Write: Dept. D., Box 57, Omaha 3, Nebraska.

BARGAIN ASSORTMENT NO. 5 — Fluorescent—This is a value seldom equalled. One chunk famous Wyoming Fluorescent and Phosphorescent opal. One chunk Nevada senile. One chunk New Mexico colemanite. One chunk New Jersey pure Willemite. One chunk Colorado rose calcite. One chunk Indiana calcite in white matrix. One chunk fire calcite Arizona, lovely soft red or pink. One chunk sphalerite Old Mexico. One chunk Montana opal Phos. and Fluorescent. One chunk New Jersey Franklinite and Willemite. One chunk Canadian scheelite and calcite, lovely blue and red. One chunk Onyx from Maine. One chunk New Hampshire Autunite. One chunk fine myerhofferite. One chunk dolomite Indiana. One chunk kyanite Nevada. All for \$3.00 plus postage on 5 pounds. West Coast Mineral Co., Post Office Box 331, La Habra, Calif. Shop address 1400 Hacienda Blvd. (Highway 39), La Habra Heights, Calif. Shop open every day and evening except Monday. Thousands of fine specimens and fine cutting material.

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SUPERIOR MINERALS—Agate Slabs—Blue and white banded, Utah, 35c sq. in.; red and yellow flowers, Death Valley, 50c sq. in.; many colors in scenic moss, Nev. and Utah, 35c sq. in. XLized Minerals—Mesa Grande tourmaline and matrix, 35c to \$35.00; Azurite and malachite, Utah, XLized on masses, \$1.00 to \$10.00; rare and beautiful combinations of aurichalcite and malachite, Utah, \$1.00 to \$20.00. Streamliner lapidary equipment. Many other rare and beautiful minerals. Ask for them. See our beautiful display at Saint George, Utah. West side of Court House. North side of Highway 91. Earl and Clyde Olmsted, P. O. Box 248, Saint George, Utah.

AGATE! AGATE! AGATE! Have found a large field of Agate in bands, stripes, mottled, etc., in all colors and color combinations, candy Agate. I want to share my good luck with you so am selling this No. 1 cutting Agate for the low price of 3 lbs. for \$2.00, or better yet, a sample of 4 good sized pieces that will cut several cabochons, drops or hearts, for 25c prepaid. Orders mailed at once. Maricopa Gem and Mineral Mart, Box 1, Morristown, Ariz.

SPECIMEN COLLECTORS and Rockhounds. Light pink Pumice specimens, very rare, resemble fluffy spun candy, dark grey and white Pumice, attractive Galena (Lead in white Quartz), Obsidian, mixed colors, Opalite, gem quality, many colors, Hematite iron, Silver ore, Calcite, Fluorite and Gypsum crystals. Very select specimens, nice size, 50c each postpaid. R. W. Deane, General Delivery, Benton, Calif.

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TEST YOUR MINERALS. Identify your unknowns. Mineral test set, including platinum wire, reagents, and all apparatus necessary for flame, bead, and blowpipe tests, in sturdy aluminum box, portable, \$10.00. Instructions and fifty detailed experiments written by professional instructor included. Literature on request. C. Coutts, Route 1, Box 91, Fallbrook, California.

ATTENTION ROCK COLLECTORS. It will pay you to visit the Ken-Dor Rock Roost. We buy, sell, or exchange mineral specimens. Visitors are always welcome. Ken-Dor Rock Roost, 419 So. Franklin, Modesto, California.

AGATIZED DINOSAUR BONE. Gem quality. Sliced half inch slabs. \$5.00 per pound. Minimum order one pound. Byron Davies, Cannonville, Utah.

INTRODUCING A NEW Opal field in California, Tahoe Forest. Every piece a gem. Moss and Fern Opal chips, assorted colors. \$1.50 per lb. Nodules 75c a lb. Experts claim these are most unusual yet. Tahoe Gem Mart, Rt. 1, Box 447-A, Grass Valley, Calif.

FINE NEW MEXICO Gem Agate. Beautiful patterns, red and golden moss, rough \$1.00 per lb., sliced 15c sq. in. Carnelian, banded, rough \$2.00 lb., sliced 20c sq. in. Jasp. Moss Agate, assorted colors, rough 75c lb., sliced 10c sq. in. 1 small slab plume agate free with each order until July 15. When down this way stop and see our giant moss agate, weight 639 lbs. Curtis, The Agate Man, 645 1st St., Hermosa Beach, Calif.

FOR SALE: Covington diamond saw, 1 two speed Covington lap. 1 comb sander and polisher and other items which make this a complete lapidary outfit. Roy Vetsch, 2334 Zanja Villa Drive, Mentone, Calif. Write P. O. Box 326, Redlands, Calif.

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AMONG THE ROCK HUNTERS

Dr. Vincent Evans gave an illustrated lecture on the Grand Canyon at May meeting of Sequoia Mineral society held in Parlier union high school. Night school lapidary class at Dinuba high school has closed for the season. Next year they plan to start a month earlier. Selma lapidary class has been polishing some trimmings from the Palomar telescope lens secured by Gates Burrell. The special quartz glass, made by Corning Glass company of New York, polishes a milky blue with amber highlights.

W. Scott Lewis was guest speaker at May 12 meeting of Mineralogical Society of Southern California, Pasadena. He illustrated his talk on geology and natural science of Sequoia National park with lantern slides. Members displayed minerals from the Sierras.

Santa Monica Gemological society installed officers at May 7 annual dinner meeting. Speaker Archie Mickeljohn discussed amateur gem cutting. Jessie Quane, former program chairman of Los Angeles Lapidary society, now is Mrs. Clarence Chittenden, wife of the president of the Santa Monica group. The society by resolution will endeavor to free Southern California scenic highways of unsightly advertising billboards.

Mother Lode Mineral society, Modesto, California, had the best attendance in its history on April field trip—83. The group motored to Knights ferry, enjoyed coffee at Cider House there, then had potluck lunch at home of Mr. and Mrs. Kaufmann in Colombia. The cavalcade then drove toward Angels Camp, parked cars and hiked to the natural bridges. George H. Needham entertained at April meeting by showing rock sections on the screen under polarized light.

Nebraska Mineralogy and Gem club presented its second exhibit of craftsmanship in gem stones May 4-31 in Joslyn Memorial. All pieces in exhibit were work of amateurs. Nebraska does not produce many stones of gem quality although there are several good localities within a day's travel of Omaha. Rockhounds prefer to find their cutting material on mountain or valley. Exchange is a second source and purchase a third. Any person interested in earth sciences or gem cutting is eligible for membership in the club, and is invited to communicate with Mrs. Minardi, 5715 North 30th street, Omaha 11, Nebraska.

Naval Ordnance Test Station Rockhounds, Inyokern, California, had several field trips during April: Indian Wells Valley stampede April 12-13; Trona pinnacles April 19; King Solomon mine, Johannesburg (gold mining) April 20; Pilot Knob for bloodstone, jasper, agate and fossils. George Burnham, mineral dealer from Monrovia, California, talked to the group May 5 on collecting. He recently returned from a trip to Mexico.

FOUR CORNERS ROCK CLUB WILL HOLD HOBBY SHOW

Four Corners Rock club, Durango, Colorado, will hold its first rock show in connection with Spanish Trails Fiesta in Durango on August 8, 9, and 10. Rocky Mountain federation clubs and other organizations, in addition to club members, have been invited to participate. Show is planned as an annual event. Kenneth Owens is president of the Four Corners club, and H. C. Brockman, secretary.



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H. Stanton Hill, instructor mineralogy, Pasadena junior college, talked on geology of Mt. Lassen national park at May 9 meeting of Pacific Mineral society, Los Angeles. May field trip goal was California federation meeting in Santa Barbara.

Wyn Jones talked on crystal formations at May meeting of San Jacinto-Hemet rockhound club. Club voted to purchase water cans from war surplus for use on desert trips.

Rock enthusiasts from 29 Palms visited Pisgah crater region April 23, finding jasper and other semi-precious stones.

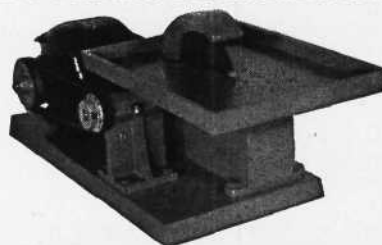
Dr. Geo. W. Bateman, state college, Tempe, Arizona, was scheduled to talk on uranium and atomic energy at May 1 meeting of Mineralogical Society of Arizona, Phoenix. At second May gathering guest speaker was S. F. Turner, U. S. geological survey, division of underground water. His topic was concretions. Society closed the season with a barbecue and potluck dinner held in South Mountain park May 25. Russ Kelly told history, development and future plans of South Mountain park, largest municipal park in U. S. Informal meetings are held monthly June through September.

Orange Belt Mineralogical society has elected the following officers to serve till May 1948: Mrs. D. H. Clark, president; C. T. Kennedy, vice-president; Mrs. Peter W. Burk, 1018 Columbia street, Redlands, California, secretary; Mrs. A. B. Cyrog, treasurer; H. L. Carpenter, federation director; Dr. W. F. Fox, Howard Fletcher, Peter W. Burk, K. Benjesdorf, directors. Officers were chosen at dinner meeting held May 6 in Fontana Woman's clubhouse. Miss Lamb of Fontana entertained with accordion music. June 8 meeting was a picnic at Devil's canyon park.

D. M. Rogers, Chicago, who calls rockhounds Jasper Caspers and Beryl Girls, suggests that by cutting sheet carborundum into discs and gluing them to old phonograph records quick change sanders can be put on a flat lap in a second or less.

FIRST ANNIVERSARY SHOW PLANNED BY SAN PEDRO

First anniversary of San Pedro Lapidary society will be marked by a rock show held July 12-13 in Banning Homes lounge. Individual and club displays of finished gem stones and those in process of polishing will be featured. Equipment necessary for field trips will be shown in graphic displays. Club meets second and fourth Tuesdays, and all work on the rocks is done on club-owned equipment located in a room in Banning Homes housing project.



6" HIGH-SPEED TRIMMING SAW. All cast metal. No wood. This saw saves time and material. Saw operates at 2000 R.P.M. Priced at \$47.50 without motor, F.O.B., Los Angeles, Calif. This price includes saw-blade, belt and pulley to give you the correct speed. Requires 1/4-horse motor. Shipping weight approximately 60 pounds.

Highland Park Lapidary Supply
1009 Mission St., South Pasadena, Calif.

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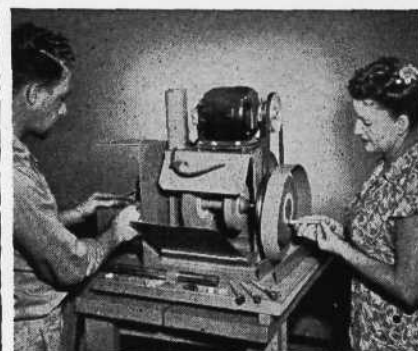
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State Mineral Society of Texas announces the following officers—J. J. Brown, president; Edith Owens, 380 South 6th street, Honey Grove, Texas, secretary-treasurer; A. E. Curry, Joe Murphy, R. E. Gault, directors. A successful mineral show was staged April 5 and 6 at the Plaza hotel, San Antonio. As a direct result, 16 new members joined the society.

Imperial Valley Gem and Mineral society held final meeting of season May 28. Report on California federation convention was given by president Sam Robinson. Members arranged new displays in showcase maintained by club in court house hall. At first May meeting member Arthur Eaton discussed fluorite. At each meeting members display new specimens or polished material.

Dr. Ralph T. Overman of the Monsanto operated Clinton laboratories of Oak Ridge, Tennessee, recently reported on activities induced by long neutron irradiations of chlorine compounds in their laboratories. He says that chlorine, which is one of the two elements forming common salt, becomes so radioactive on exposure to extra neutrons that one form probably will continue giving off radiations for more than one million years. Some of the radio-active chlorine formed by the bombarding of salty sea water by atomic bombs at Bikini will have a life of a million years. This means that the radio-activity produced by the bombings at Bikini may be felt in the world one million years from now.

OFFICERS ELECTED FOR NEW SAN JACINTO-HEMET GROUP

Officers of new San Jacinto-Hemet Rock Hounds club were elected at May 14 meeting. Thomas W. Harwell is president; Mrs. Marion Harwell, Box 282, San Jacinto, secretary-treasurer; and Bud Clark, chairman of planning committee. A field trip to Last Chance canyon was held May 10-11, with members finding agate, jasper and some precious opal.

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At Searles Lake Gem and Mineral society May 14th meeting Fred Leste and Eric Peters showed color slides of the '49er parade and two reels of the recent Death Valley trip. Eddie Redenbach and Roy Bailey put on a black magic show. Frank Davenport talked on emerald, May birthstone. The club enjoyed a box social June 18 at the MacPherson rancho in Homewood canyon. Games, a study of the stars and a rock auction furnished entertainment. Annual Telescope peak climb was slated for June 21.

R. C. Cole, ore buyer for American smelting and refining company, Salt Lake City, talked on how commercial value of minerals and ores is determined at May 6 meeting of Mineralogical Society of Utah. Members displayed ore specimens and the best material collected on April field trip. May 17-18 field trip was to Topaz mountain to prepare for the convention field trip in June.

Los Angeles Mineralogical society heard Dr. John Herman, chemist and assayer, discuss minerals of the atomic age at its May meeting. Iron remains our most important mineral, with aluminum second, according to Dr. Herman.

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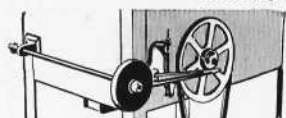
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J. L. Kraft reviewed his new book, *Adventure in Jade*, at May meeting of Chicago Rocks and Minerals society, held in Green Briar Park field house, club's new meeting place. Kraft exhibited jade in all colors. Club workshop is again in operation at Green Briar park on Tuesday and Thursday evenings. April meeting featured talk by Dr. Willems who reviewed his new book on faceting.

Pomona Valley Mineral club has elected the following officers: Fred Kroger, president; Glen Weist, vice-president; Mrs. James A. Kryder, 108 Baseline road, Claremont, California, secretary; David C. Grover, treasurer; Hollis B. Page, board member. Earl A. Kine, skilled lapidary, talked on origin of lapidary art at May meeting, and Genera B. Dowe spoke briefly on emeralds, concluding the series of talks on birthstones.

Harry Fuller talked on geology as applied to mining and M. G. Mastin on magnesia at April meeting of Mineralogical Society of Southern Nevada, Boulder City. Business meeting April 15 was highlighted by sale of mineral and gem specimens and by a showing of color slides by member Boynton of Indian petroglyphs near Nelson, Nevada, and shots of Valley of Fire and upper Lake Mead. A two day field trip to Latic, California, yielded good jasper.

ROCK CLUB ORGANIZED BY RAMONA MINERAL HOBBYISTS

Mrs. Charles F. Harper reports from Ramona, California, that a rock club is being organized there with 20 charter members. They plan one meeting and one field trip each month. A rock display was staged at Mrs. Harper's home to determine how many rock minded people there were around Ramona. One successful field trip has already been enjoyed by 15 members.

Illustrated talk on South America by Kilian and Margaret Bensusan was scheduled as feature of May 3 meeting of San Fernando Valley Mineral and Gem society, held at Sepulveda Women's club. Film on gold mining and refining was shown by Edward Morris, mining engineer, at the April meeting. April field trip was to Opal mountain, with Mrs. C. E. Milligan of Hinkley as hostess. Fifty-three members attended. May field trip was planned to Ord mountain beyond Barstow.

E. Grace Peters, publicity chairman for Los Angeles Lapidary society, reports installation of officers at annual dinner meeting June 2: John Gaston, president; Ted Schroeder, first vice-president; Thomas Daniel, treasurer; Jean Bennett, secretary; Leland Quick, historian. All committees gave annual reports. A three day field trip to Lead Pipe nodule area was scheduled May 30-June 1. Society's address is Box 2184, Terminal annex, Los Angeles 54, California.

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Richard Miller of state museum, Carson City, Nevada, talked on Nevada Indians, their crafts and history, at April 22 meeting of Fallon Rock and Gem club. Three departments have been organized, geology, lapidary, mineralogy. Jerry Donniss is lapidary chairman. Others have not been appointed. April field trippers to a geode district east of Fallon report a successful day.

Members of Mineralogical Society of Southern Nevada are compiling reference books. When a member encounters a good article on rocks or minerals or pertinent subject he makes sufficient copies for distribution to all.

C. A. Morrison of Linde Air products was speaker at May 6 meeting of San Jose Lapidary society. He displayed faceting machines and let members operate them. The mineral show was very satisfactory with an official attendance of 3618.

S. C. Brown, United States geological survey, told May meeting of Yavapai Gem and Mineral society, Prescott, Arizona, about Colombia, South America, where he did geological work for Standard Oil with headquarters at Bogota. H. M. Babcock assisted, showing kodachrome slides. Field trip to old Senator mine was planned for May 18. Moulton B. Smith was appointed chairman for mineral show to be held July 19-20. Junior members conducted June meeting with John Butcher chairman and Ritchie Black secretary.

Dr. M. J. Groesbeck was guest speaker at May 12 meeting of Kern County Mineral society held jointly with the Historical Society in Kern county chamber of commerce building. The society gives a monthly prize for best specimen found on field trip held between meetings.

Chicago rocks and minerals society has a new meeting place—Greenbriar field house, 2650 West Peterson avenue, Chicago, Ill.

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Of a Rockhound

By LOUISE EATON

Xperts claims that to be GOOD a stone's gotta have (1) beauty, (2) durability, (3) rarity. Probably the xperts was thinkin about dimunds, rubies an sutch. Desert semi gems possesses these qualities too, an besidz that they are mutch mor individual than the so-called precious wunz.

The desert is sumthin like married life: yu gotta be with it 24 hours a day 365 days a year xperiencing moods an reackshuns before yu knows whether or not yu really loves it. Yu can visit or make field trips time after time an think it the most wonderful place on erth—peaceful, informal, unsmelly, an with space unlimited. But it's only by sharin heat, cold, bugs, dust, earthquake, that yu discovers yur true feelins. If 'sepperation makes yur hart grow fonder an yu longs to get back to desert sunshine an serenity after a dose uv smog or civilization then yu knows that the desert is yur true love. Yu can settle down and be content in spite uv minor irritashuns.

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Discussion on opals featured May 7 meeting of Mojave Gem and Mineral society held in library of Barstow high school with President William Gabriel presiding. Next regular meeting of the club was set for September. Picnics will be held during the summer and a class in cutting and polishing will be held Monday and Wednesday evenings with Mr. Irwin in charge. Faith R. Dotters, Daggett, California, is secretary-treasurer.

Kodachrome-illustrated lecture on Crater Lake, Oregon, by Dr. Hubert O. Jenkins featured joint meeting of Sacramento Mineral society and Sierra club on April 25. First field trip of the season, by Sacramento society, was held April 27 at Agate mountain 26 miles east of Lodi. Fair moss agate was found by 25 members attending.

F. K. Shelton and associates of U. S. bureau of mines, Boulder City, Nevada, speaking before the meeting of the electro chemical society in Louisville, Kentucky, described a new, electrolytic process for removing cobalt metal from the ore, in paying commercial quantities.

PRECIOUS OPAL STRUCTURE

Careful study of many thousands of specimens of both cut and uncut opal seems to bring out evidence that the difference between precious opal and common or semi-opal depends on the way in which the stones were originally formed, and not on fractures, cavities or water content.

It is true that precious opal usually contains more water than the more common varieties, but this does not cause the beautiful play of fire, although it often seems responsible for the milky opalescence.

Common and semi-opal seem to have been formed in a single solid mass, either white or colored, from a silica gel. Precious opal owes its weird beauty as well as its fragile nature to its structure. It was formed one thin layer on top of another, and a little at a time. This accounts for the beautiful play of colors as well as for little cavities and water bubbles.

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A stone sold and guaranteed all over the United States as "genuine black onyx" in reality usually is a form of agate from Brazil, artificially colored with a solution of sugar and H₂SO₄. Real black onyx is rare. It belongs indeed to the agate family but forms a very special variety. It consists of alternate, parallel and perfectly straight bands of shiny black and pure white. With any variation from this formula, it ceases to be black onyx. A careful examination of the white lines with a strong glass often shows that they are not single lines, but are themselves compounds of many white lines all parallel.

NEWLY DISCOVERED CRYSTAL EXHIBITED AT GOLDEN GATE

Brazilianite, most recently discovered variety of crystal, is included in the new Crystal exhibit in North American Hall of California Academy of Sciences in Golden Gate park, San Francisco. William B. Pitts, honorary curator of gem minerals at the academy, says that this new crystal was found by American Museum and Smithsonian Institution Brazilian expedition last year.

In the new exhibit of 50 types of crystal Pitts has assembled specimens of everything from amethyst to zircon. Crystals are shown in their natural forms and as cut into finished gems. Several gems are shown in the matrix. A large emerald in its matrix was given the academy by the government of Brazil. A diamond in its matrix was obtained from Pike county, Arkansas—the only place in the United States where diamonds are mined.

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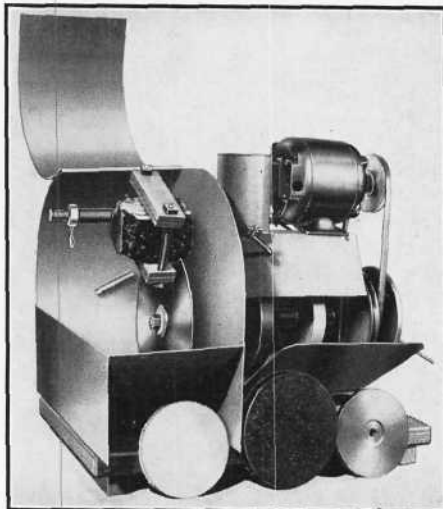
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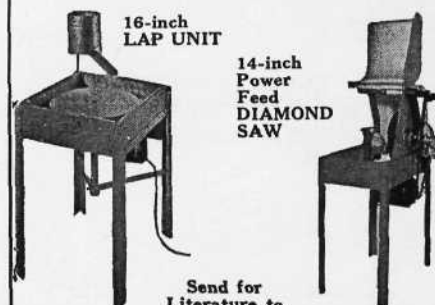
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Palm Springs Indian Decision Clarified . . .

Secretary of the Interior J. A. Krug characterized as entirely erroneous a recently published report of a circuit court of appeals decision in San Francisco concerning Indian claims to valuable land in the area of Palm Springs, California. The report implied that the court decision was giving valuable land "back to the Indians" contrary to desires of the department of the interior.

"The only dispute at issue before the court," said Secretary Krug, "is one between an Indian and his fellow-tribesmen. The department of the interior has defended the right of the tribe to this property against various attacks since 1876."

The Secretary pointed out that the court's decision was a reversal of two previous decisions by the same court upholding the department's claim of the tribe's right to the land. The basis of the latest

decision was an allotment action that was made by a subordinate official in the field and was never approved by the Secretary of the Interior. Such action, the court held, gave the successful plaintiff a special right to two valuable tracts as against the tribe. The plaintiff's attempt, however, to secure two additional tracts in the name of his father and brother who died 21 years ago, was disapproved by the circuit court, as were the attempts of two other Palm Springs Indians to secure especially valuable portions of the tribal estate for themselves.

"At any rate," said Secretary Krug, "the question at issue is not one of giving the land back to the Indians but whether valuable tribal lands can be given to individual Indians by subordinate officials without the consent of the tribe that owns the land. Final adjudication of that issue now rests with the supreme court."



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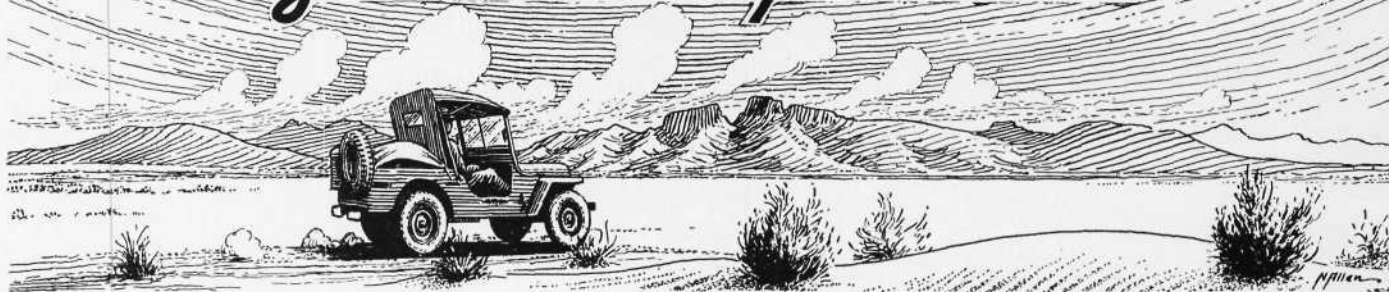


TRUE OR FALSE

smart you are, but rather to make you acquainted with a wide variety of interesting facts regarding the desert country—its history, geography, minerals, botany, famous people, and general lore. The average person will get ten correct answers. A desert rat should score 15. Only the top students of the desert country ever reach 18. The answers are on page 47.

- 1—The chuckawalla is a poisonous lizard. True..... False.....
- 2—Billy the Kid was a notorious outlaw in Utah. True..... False.....
- 3—Telescope peak overlooking Death Valley, was given its name because of a telescopic observatory at its summit. True..... False.....
- 4—Ocotillo puts on a new crop of leaves after every heavy rainfall. True..... False.....
- 5—White Sands national monument is located near Alamogordo, New Mexico. True..... False.....
- 6—The break in the Colorado river which filled Salton Sea in 1905-6-7 was closed by U. S. Army engineers. True..... False.....
- 7—Turkeys run wild in the White mountains of Arizona. True..... False.....
- 8—The Saguaro cactus was an important source of food for the Papago Indians before the white men came to the desert. True..... False.....
- 9—Mark Twain was once a reporter in Virginia City, Nevada. True..... False.....
- 10—Kearny's Army of the West crossed the Salton Sea in boats in 1846. True..... False.....
- 11—Montezuma Castle was built by Death Valley Scotty. True..... False.....
- 12—The University of New Mexico is located at Albuquerque. True..... False.....
- 13—Obsidian, or volcanic glass, is always black. True..... False.....
- 14—Mt. Timpanogos is in Utah. True..... False.....
- 15—The foliage of juniper trees turns yellow in the fall. True..... False.....
- 16—Pinyon nuts are gathered by the Navajo Indians only for ceremonial purposes. True..... False.....
- 17—The famous Xavier del Bac mission is located near Tucson. True..... False.....
- 18—Father Font's diary describes Coronado's journey in quest of the Seven Cities of Cibola. True..... False.....
- 19—Cochise was a leader of the Apache Indians. True..... False.....
- 20—Indians most frequently seen on the streets of Needles, California, are Mojaves. True..... False.....

Just Between You and Me



By RANDALL HENDERSON

THE POSSIBILITY that atomic energy may be used to distil ocean water and thus make available an unlimited supply of fresh water for the irrigation of the world's arid lands, is suggested by Dr. Linus Pauling of the California Institute of Technology.

That is a refreshing suggestion, coming at a time when the radio, the press and various prophets of doom appear to have formed a conspiracy to scare the daylights out of us with their predictions of the dire calamity which awaits us when some other nation has solved the problem of making atomic bombs.

All over this desert are fertile valleys—millions of acres—which with an ample supply of water would become the most productive lands on earth. Salt-free ocean water not only will be good for the land but perhaps it would also solve some problems in human relations. It would put an end to this everlasting squabble over the division of the waters of the Colorado river.

I am not as pessimistic as some of the commentators. While I do not discount the power of atomic energy as a weapon of destruction, I am reluctant to accept the idea that any nation will so far lose its sanity as to launch a war of conquest with atomic weapons in the face of the known instruments which we Americans possess for reprisals.

Atomic energy may be a tremendous force for the preservation and advancement of the human family—and as a matter of fact the vast laboratory which we Americans through our taxes are financing for the continued study of this new source of power is devoting its attention to the peace-time use of nuclear energy no less than to instruments of war.

I like to turn from the headlines which foretell possible destruction and death from the atom bomb and use what imagination I have to visualize the many benefits which may derive from the industrial application of atomic energy to the constructive problems of this world—the problem of food for the growing population, of health and economic security, and of education for the great masses of humanity who still live in dirt and superstition. For, while nuclear power may bring tragic consequences if it is mis-managed, it is also true that it holds the potential for benefits of almost inconceivable value to mankind—and that in the not far distant future.

As for the practicability of bringing distilled ocean water to the desert for irrigation purposes, I have only to remind you that Los Angeles tunneled through a half dozen mountain ranges to take Colorado river water to the coastal area, and engineers are now planning a more stupendous project to serve central Arizona with water from Grand Canyon.

And what will happen to the desert when another million or two settlers move in to occupy the newly watered valleys? Well, it still will be a glorious land of sunshine, with diamond-studded skies at night and gorgeous sunsets and pastel-colored mountains. Those things are part of Nature's endowment, and humans could not change them if they would.

A great portion of the desert will always be too rocky and rugged for agriculture—a wilderness terrain where humans

may find the peace and solitude which are good tonic for most of our ills. There simply will be more people in close proximity to enjoy these things. And they will be good wholesome people, for the desert—the real desert—holds no attraction for those who demand a pampering environment.

* * *

Marshal South is with us again this month, with such a story as only Marshal can write. He lives on the rim of the desert at Julian, California, and makes frequent excursions into the desert. Marshal is looking forward to the time when he can set up a little shop in the desert country and work at his leather and silver crafts—and contribute regularly again to *Desert Magazine*.

Tanya and the children are making their home in Carlsbad, California, and according to reports the youngsters, after their long residence at Yaquitepec on Ghost mountain, have not found it especially difficult to readjust themselves to community life and school. Those who feared, during the long sojourn of the Souths on remote Ghost mountain, that the children were not getting a proper start in life, overlooked the fact that young children are very, very adaptable. It is only when we reach maturity that habits of thought and action become rigid, and change becomes difficult.

* * *

Some time in August, on days to be announced later by the tribal priests, the Snake and Antelope clansmen on the Hopi mesas in northern Arizona will emerge from their kivas to hold the strangest religious ceremonial observed in America. I refer to the annual Hopi Snake dance.

Let no one doubt the nature of this ceremony. Weird as it may appear to those of other religious faiths, the Snake dance is as sacred a ritual to the Hopi as communion and high mass are to the Protestant and Catholic. Visitors are tolerated, and treated with dignified courtesy. But the Snake dance of the Hopi was being held annually many generations before there were white spectators to sit on the housetops and watch the ritual, and despite the efforts of missionaries to change the beliefs of these sturdy tribesmen, it probably will continue for many more generations.

Actually, the Snake dance is the final phase of a prayer-for-rain ceremony which begins in the underground kivas of the clansmen nine days earlier. Few white men have ever witnessed those underground rituals when the snakes are washed and prepared for their eventual release after the dance. One of those who has had this privilege is Godfrey Sykes of Tucson, and the story of his experience will be in the August issue of *Desert*.

I hope all *Desert* readers sooner or later will have the opportunity to be present at the Hopi Snake dance. If you go there sensing the sincere religious nature of the ceremonial it will leave an emotional imprint never to be forgotten. For the Hopi are a deeply religious people, and whether or not we approve their gods or their form of worship, their faith is something we must respect.



HISTORY WAS MADE ON THE BANKS OF THE GILA

The Gila river born from snowfield and icicle in the high mountains of western New Mexico, mingles its red waters at last with the flood of the turbulent Colorado in the low desert of southwestern Arizona. On its journey across the breadth of Arizona, the Gila crosses what Ross Calvin calls "of all our frontiers the deadliest, the rowdiest."

In *RIVER OF THE SUN*, Calvin has written the story of that frontier and of the Gila and of the people who helped make its history. He describes the physical appearance of the river, outlines its course and gives a vivid and at times brilliant picture of the country through which it flows. He tells the tragedy of erosion along "the world's muddiest river," what it has done and what has been done to control it.

The written history of the Gila goes back more than four centuries, to the time when Castañeda, with Coronado expedition, reported it as a "deep and reedy stream." Father Kino, Kit Carson, Kearny, Cooke, Emory, Geronimo and scores of famous and less famous persons played their part in the story of the Gila. Calvin sketches their adventures and tells about the Butterfield stage line, the Santa Rita copper mine, prehistoric ruins and modern agriculture.

A rather thin book dealing with such a multitude of subjects must of necessity be sketchy. But Calvin's ability to paint word pictures and to probe the reality lying beyond surface indications, gives his account an interest which never lags. Readers who remember the author's earlier *Key Determines*, will not be disappointed in *RIVER OF THE SUN*. Typographically, the book is outstanding.

University of New Mexico Press, Albuquerque, New Mexico, 1946. 153 pp., photos. \$3.50.

ANTHOLOGY OF SOUTHWESTERN LIFE, LITERATURE COMPILED

Material in the anthology *SOUTHWESTERNERS WRITE* was selected, according to its editors, T. M. Pearce and the late A. P. Thomason, "to display to readers the intermingled patterns of living and contrasting current of thought in Oklahoma, Texas, New Mexico and Arizona." Thirty-two contributors are represented under classifications of interpretation, fiction, narrative and opinion. The book is

illustrated with sketches by Helen S. Pearce.

There is much familiar material by well known writers in the volume. Represented are J. Frank Dobie, Harvey Ferguson, D. H. Lawrence, Paul Horgan, Oliver La Farge, Conrad Richter and George Sessions Perry, to mention a few. The selection not only opens the door for a broad acquaintance with the literature of the Southwest but it also reflects the philosophies and personalities of those compiling it.

Sections including interpretation and narrative are well chosen and contain much meat. The division on opinion has thought-provoking and some controversial items. The book, in addition to offering hours of interesting reading, serves as an excellent introduction to the Southwest and its writers and will bring attention of readers to many fascinating volumes from which the material is excerpted. A well-written introduction outlines the story of Southwestern writing from petroglyphs of the most ancient authors to the present. *SOUTHWESTERNERS WRITE* is announced as a successor to the anthology, *America in the Southwest*.

University of New Mexico Press, Albuquerque, New Mexico, 1946. 365 pp. Index. \$4.00.

ADVENTURES OF A JADE HUNTER

ADVENTURE IN JADE is a unique and informal book in which James Lewis Kraft tells of his love for jade, of his ad-

ventures seeking it in this continent and about the joys, beauties and fascinations of rockhounding and amateur lapidary work. He has written a charming essay filled with good philosophy and good humor. He also has compiled the hitherto unpublished history of jade in America and filled pleasant pages with information which is fascinating to rock collector and cutter.

Few rockhounds have leisure or resources to ride their hobby with the enthusiasm which Kraft, of Kraft Foods company has shown. But all of them will enjoy reading about his experiences. It is a small book, but wholesome and informative.

Henry Holt and company, New York, 1947. 81 pp. Colored frontispiece. Bibliography. \$3.00.

TRUE OR FALSE ANSWERS

Questions are on page 45

- 1—False. The chuckawalla is harmless.
- 2—False. Billy the Kid was an outlaw in New Mexico.
- 3—False. Telescope peak was given its name in 1860 by the Dr. Samuel Gregg exploring party because of the fine view from its summit.
- 4—True. 5—True.
- 6—False. Break that filled Salton sea in 1905-6-7 was closed by Southern Pacific railroad engineers.
- 7—True. 8—True. 9—True.
- 10—False. There was no Salton sea when Gen. Kearny's army crossed the desert in 1846.
- 11—False. Montezuma Castle in Arizona was built by prehistoric Indians.
- 12—True.
- 13—False. Obsidian is found in many shades.
- 14—True.
- 15—False. Juniper is an evergreen.
- 16—False. The Navajo gather pinyon nuts to eat.
- 17—True.
- 18—False. Father Font wrote about the journey of Juan Bautista de Anza on the trek to California in 1775-6.
- 19—True. 20—True.

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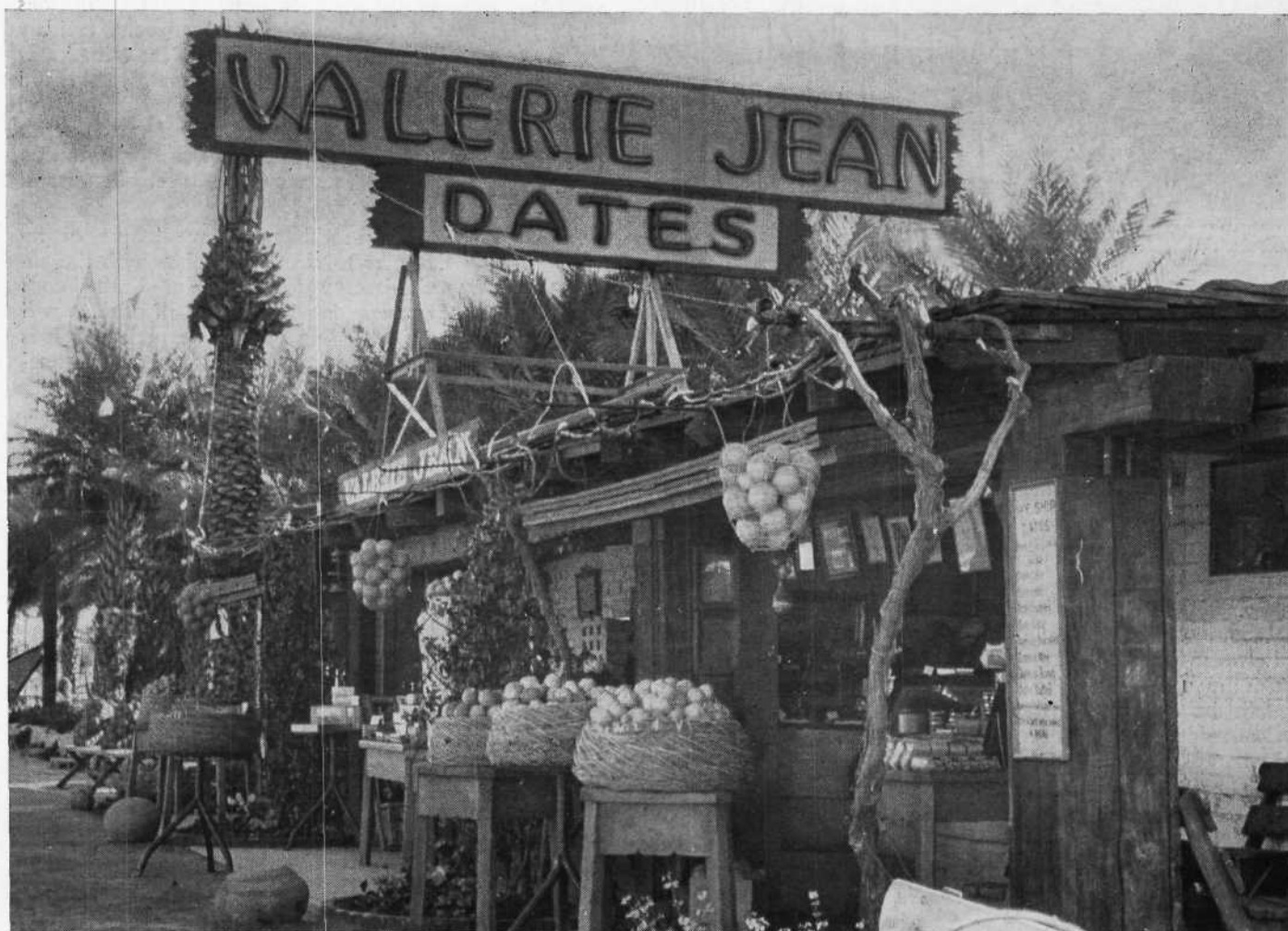
Legend—history—gold discovery—ghost towns—Indians—Oases—every phase of life in the desert both past and present is presented in this vivid book of 357 pages, written by a man with an intimate acquaintance with his subject.

Mostly, Corle writes about people—the "simple, pure, guileless, happy and childlike" dwellers in Havasu canyon, John D. Lee of the Mountain Meadows massacre, William Lewis Manly and the Jayhawkers, Shorty Harris, Death Valley Scotty, and the explorers and pioneers who came before and after them.

DESERT COUNTRY is devoted mostly to the lore, the history, and contemporary life in the region extending from the Mexican border to Nevada, and from the Mojave to Grand Canyon. There is drama in the story of the desert—and Corle has found much of it.

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